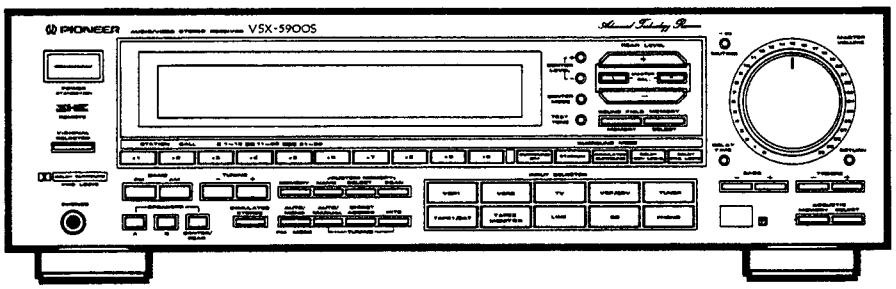
Operating Instructions

AUDIO/VIDEO STEREO RECEIVER

VSX-5900S



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

About the Demonstration Mode

- The demonstration mode is activated by turning on the power switch while holding down the ACOUSTIC MEMORY button (from power standby condition). The demonstration will appear on the display.
- Press any other switch to cancel the demonstration.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

RETURN function

This function returns the unit to a set of initial settings and ready to broadcast tuner. This is helpful during troubleshooting or when no sound is output. For details, refer to page 19.

PIONEER®

The Art of Entertainment

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS – The operating instructions should be retained for future reference.

HEED WARNING – All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

WATER AND MOISTURE – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION – The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING – The appliance should not be mounted to a wall or ceiling.

VENTILATION – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION – If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES – An outdoor antenna should be located away from power lines.

NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE – The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged.
- Objects have fallen, or liquid has been spilled into the appliance.
- The appliance has been exposed to rain.
- The appliance does not appear to operate normally or exhibits a marked change in performance.
- The appliance has been dropped or the enclosure damaged.

SERVICING – The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC — NATIONAL ELECTRIC CODE

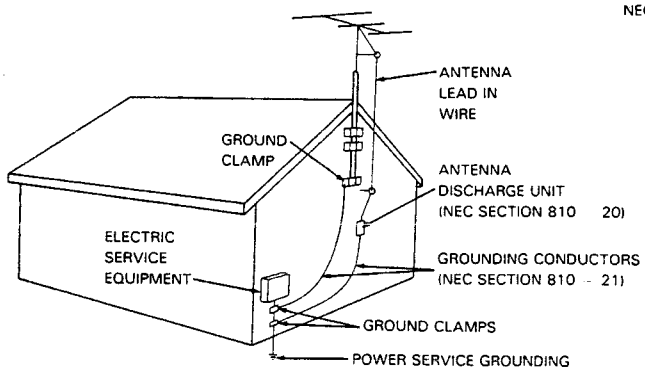


FIG. A

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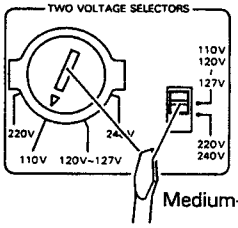
BEFORE OPERATING, ADJUST THE POSITION OF THESE SWITCHES

TWO VOLTAGE SELECTOR SWITCHES

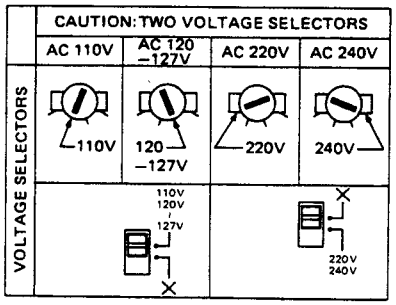
Only multi-voltage models are provided with these switches. U.S., Canadian, European, U.K. and Australian models are not provided with these switches.
Mains voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.
The line voltage selector switches are on the rear panel. Before your model is shipped from the factory, these switches are set to the power requirements of the destination. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

1. Use a medium-size screwdriver.
2. First, insert a screwdriver in the groove of the voltage selector at the right, and adjust so that the tip of the groove points to the voltage value of your area.
3. Next, insert a screwdriver in the groove of the voltage selector at the left and adjust until the voltage is the same as at the right.



Medium-size screwdriver

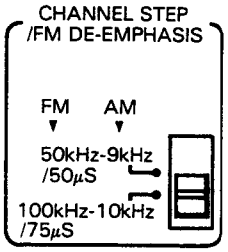
NOTE:
Both switches must be in the same switch setting; otherwise, unit can be damaged.



CHANNEL STEP/FM DE-EMPHASIS SWITCH (Not available on U.S. and Canadian models)

The unit has been factory preset to the channel allocation and de-emphasis value for the area in which it is to be sold. If these values are set incorrectly, the frequency display may stop at the wrong frequency, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.
[100 kHz/10 kHz/75 μs] position:
Set to this position for areas with an FM reception step of 100 kHz, AM 10 kHz, and de-emphasis 75 μs.
[50 kHz/9 kHz/50 μs] position:
Set to this position, for areas with an FM reception step of 50 kHz, AM 9 kHz, and de-emphasis 50 μs.

NOTE:
When unsure about the channel allocation and de-emphasis values for your area, consult your dealer for correct information.



FEATURES

The VSX-5900S audio-video component combines the functions of receiver, wireless remote control, audio-video selector and surround processor. This unit will play a central role in your enjoyment of audio-visual media.

• BUILT-IN DIGITAL DELAY, DOLBY SURROUND CIRCUIT

Enjoy the presence and the expansive effect of surround playback. Four different surround effect (STADIUM, SIMULATED SURROUND, DOLBY 3CH LOGIC, DOLBY PRO LOGIC) and 7-step delay times (STADIUM, SIMULATED SURROUND), 4-step delay times (DOLBY PRO LOGIC) are available.

• LARGE, MOTOR DRIVEN VOLUME KNOB

The large volume knob contributes to operational convenience and positive response. You can even operate it via remote control. When you change the volume setting using the remote control unit, the knob turns by itself, making it easy to keep track of the current setting.

• VIDEO SIGNAL SELECTOR (Simulcast function)

Allows free combination of various audio-visual sources during playback and over-dubbing, enabling you to produce your own original video product.

• TWO-WAY VCR COPYING AND MONITORING

VCR 1 – VCR 2: Copying of video cassette tapes can be performed in either direction.
VDP/CDV – VCR 1, VCR 2: Allows simultaneous production of two copies from video disc or compact disc with video.

• SOUND FIELD MEMORY FUNCTION

Surround mode, Balance, Delay time, and Acoustic memory are among the 5 presets possible with this function.

• ACOUSTIC MEMORY FUNCTION

Five types (A—E) of tone control settings can be preset. The settings for loudness and flat tone response functions can also be selected quickly.

• CUSTOM MEMORY FUNCTION

Stations can be preset according to the genre of the material broadcast, and Memory Scan of a particular genre can be carried out.

• MULTI-ROOM REMOTE JACK

The optional MR-100 Multi-room remote control unit can be connected to the Multi-room remote IN jack.

• 60/30-MINUTE SLEEP TIMER FUNCTION

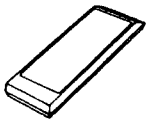
• AV PROGRAMMABLE REMOTE CONTROL UNIT WITH SELF-ILLUMINATED BUTTONS

With the attached remote control unit you can operate any Pioneer audio or video component bearing the SR mark. Using additional learning functions a whole AV surround system including a TV and VCR from other manufacturers can be controlled. (Some manufacturers' remote control systems, however, are not suitable for programming.)
Pre-programmed with Codes to control TVs and VCRs from other 12 major manufacturers.

ACCESSORY ITEMS

FM T-type Antenna

AM Loop Antenna

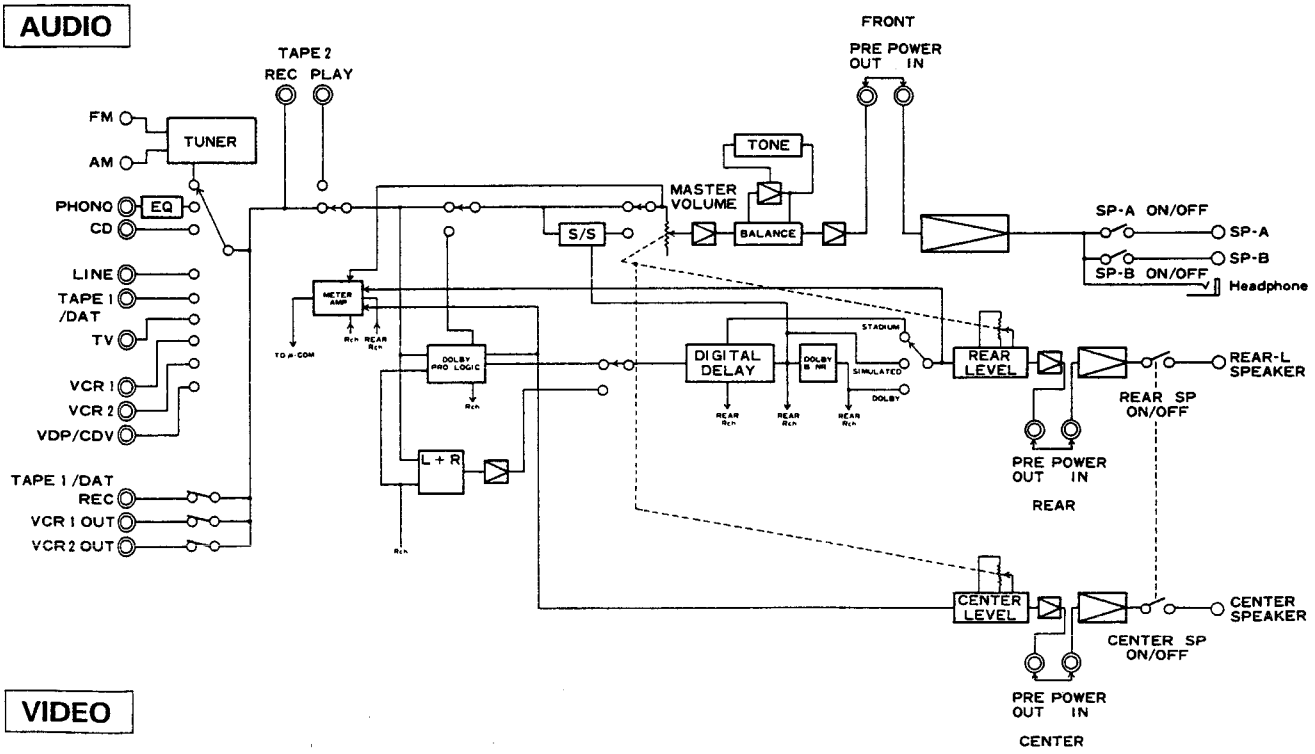


Audio/Video programmable remote control unit

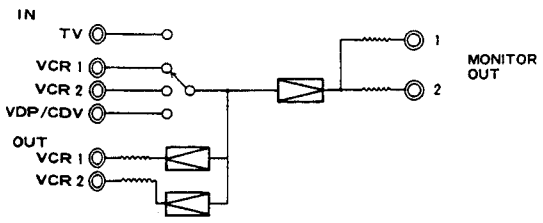
Alkaline dry cell battery (size "AA" (LR6/AM-3))

BLOCK DIAGRAM

AUDIO



VIDEO



SURROUND EFFECT

This unit has a built-in surround processor for adding presence and an expansive effect to the sound.

• STADIUM:

Effective for a stereo but not a monaural source. The "STADIUM" effect creates efficient, reverberated sounds to obtain an expansive sound field. For music sources like a rock concert, you can feel if you were at the live concert seated very close to the stage. For sports programs such as a baseball game, you can enjoy a powerful sound, thus obtaining a stadium-like effect.

• SIMULATED SURROUND:

The "SIMULATED" creates effects of reverberated and reflected sound from the walls and ceiling, similar to a concert hall. These sound effects added to the actual sound from the source make you feel as if in a more expanded space. The different ranges of the expanded space can be set by the DELAY TIME button.
For example, set the Delay Time to 15 ms or 20 ms for a live-house concert. For chamber music, set to 20 ms. For orchestral music, set to 35 ms. The "SIMULATED" also gives the effects on monaural sources by outputting the reverberated sound from rear speakers while keeping the output sound from front speakers as it is. Turn on the "SIMULATED" for a monaural source to gain the effective surround playback. When using a monaural source, it is more effective if used with SIMULATED STEREO.

• DOLBY 3CH LOGIC:

Combining the rear speaker signal with that of the front speakers results in your being able to enjoy a regenerated sound field which has comparatively more presence and a more expansive feeling from the front 3 channels (front L, front R, and center speakers) than that of ordinary stereo regeneration.

• DOLBY PRO LOGIC SURROUND:

Choose this setting for movies and music (especially Video Discs and video tapes bearing the DOLBY SURROUND mark) playback.
DOLBY PRO LOGIC SURROUND continuously detects the size and direction of the dominant signal and cancels undesirable crosstalk, thereby providing signal emphasis.
It makes you clearly perceive the directions where music comes from. Real flow of sound also can be re-created naturally using this feature. You can feel as if being in the outstanding and expansive sound field.

[For DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC]

You can choose from the following settings:
Center Mode Choices:
(When using a center speaker:)
• **NORMAL** — Low range frequencies, which have little effect on directionality and positioning, are routed to the left and right front speakers. So you can use a relatively small size speaker as the center speaker.
• **WIDE** — If you use a large size center speaker, choose this setting. The full frequency range of the Dolby Surround center channel, from low to high, is routed to the center speaker.

(When not using a center speaker: DOLBY PRO LOGIC SURROUND)
• **PHANTOM** — The signal which would have been sent to the center speaker is divided equally between the left and right front speakers.

When using DOLBY PRO LOGIC SURROUND, a delay time setting of 20 ms is commonly used. Use a different setting if you prefer.
Even if they do not bear the DOLBY SURROUND mark, some video recordings may be Dolby Surround encoded.

DOLBY 3CH LOGIC can be used with stereo sources not encoded with DOLBY SURROUND.
Choose the SIMULATED SURROUND mode if the source sound signal is mono. Little or no sound will be heard from the surround speakers if the STADIUM or DOLBY PRO LOGIC SURROUND mode is selected. With DOLBY PRO LOGIC SURROUND, monaural source sound will be heard only from the center channel at settings other than the PHANTOM position.

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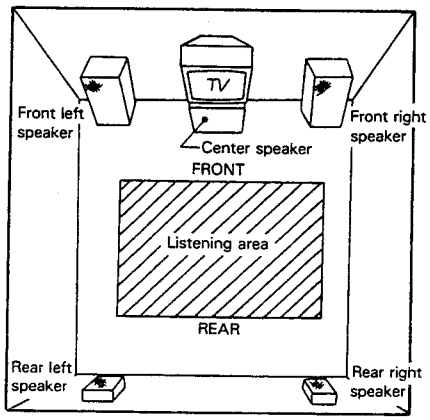
Speaker Installation Examples for Surround

To get the most out of the surround system, place the speakers as shown below.

An example of speaker location



If the rear speakers are positioned at an extreme distance, the surround level becomes unable to adjust and the surround effect will not be fully achieved.

Note:
Dolby Surround will not operate correctly if the signal passes through a graphic equalizer.
When using Dolby Surround, turn off the TAPE 2 MONITOR button or set the graphic equalizer for flat response or to its "through" (or off) setting, if you have one in use.

NOTE:
- *To avoid interference with the picture on a nearby TV set, use magnetically shielded speaker systems. This is particularly important for the center speaker since it is usually located closest to the TV.*
- *Position the left and right channel speakers at equal distances from the TV set and approximately six feet from each other.*
- *Position the center speaker above, below, or behind the TV set. Sound may not appear to coincide with the picture if you position it next to the TV set.*
- *Rear speakers are best positioned slightly above ear level.*

SIMULATED STEREO

This function transforms monaural signals into simulated stereo sound. Use it when you wish to experience a sense of stereo presence when listening to AM broadcasts, or VCR and other monaural signal sources.

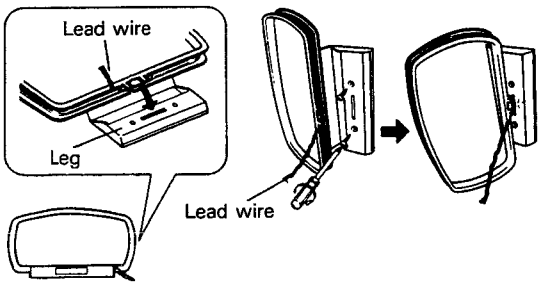
NOTE:

- *The simulated stereo function can also be used with stereo sound sources, but it will result in an effect somewhat different from the normal stereo sound.*
- *With a monaural source, switch the SURROUND MODE to the SIMULATED SURROUND position. In any other position (STADIUM, DOLBY SURROUND), there will be no effect.*

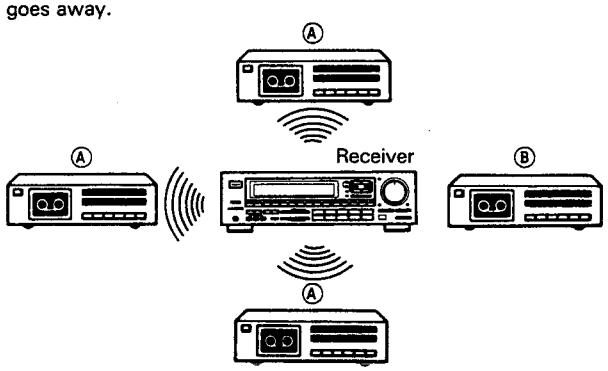
CONNECTIONS

Setting Up the AM Antenna

- Insert the claw on the bottom of the antenna into the hole in the leg.
- Place the antenna on a level surface and rotate it to locate the orientation that yields the best reception.
- Use the attachment hole in the leg to screw to wall or other location, then insert the claw on the bottom of the antenna into the hole in the leg (fixing the antenna in the direction that gives the best reception).



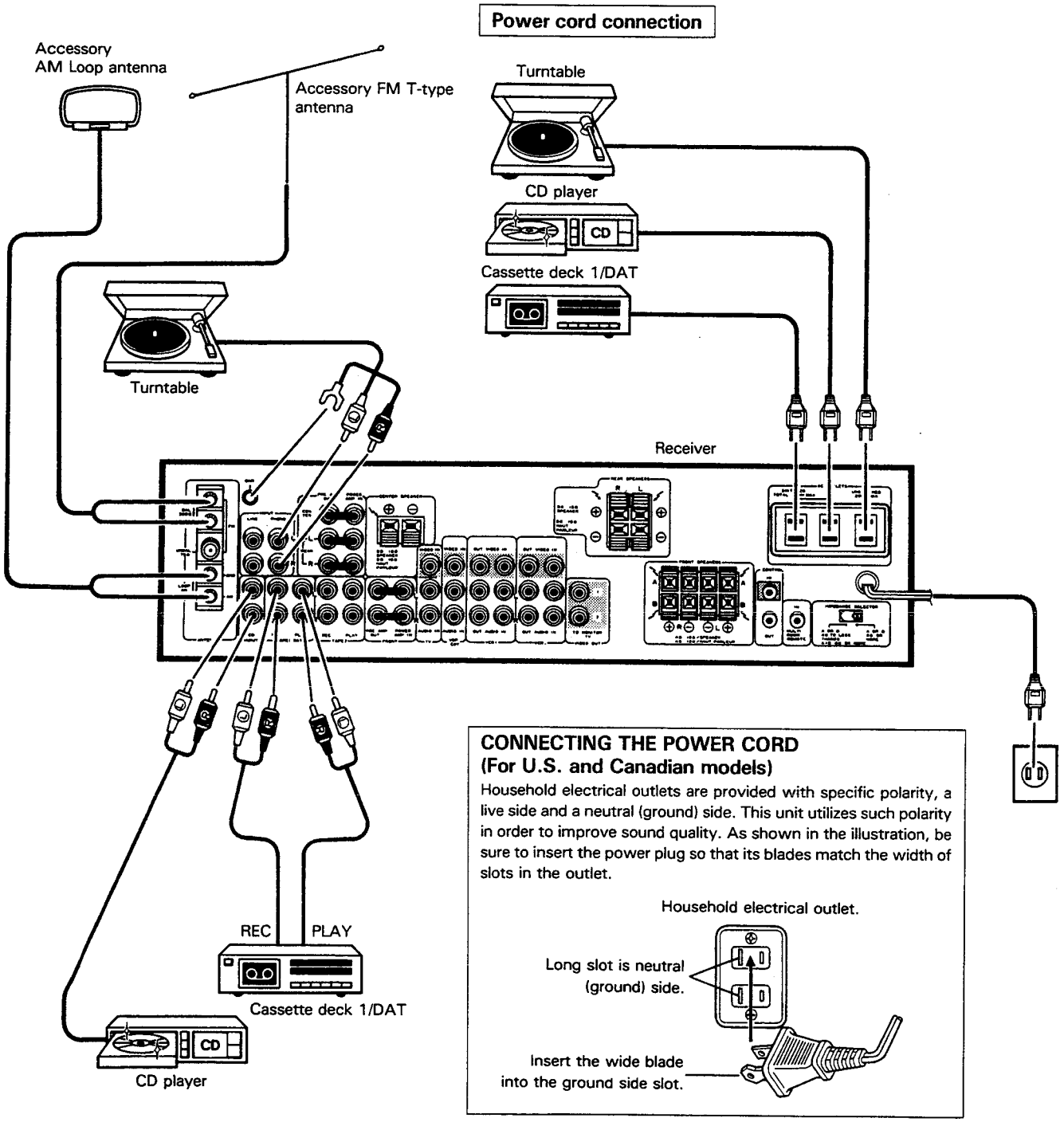
Precaution regarding installation position of cassette deck.
If the cassette tape deck is installed in the Ⓐ positions shown in the drawing below, hum may occur during playback.
If there is any hum, move the unit away to a position where the hum goes away.



BASIC AUDIO SYSTEM CONNECTIONS

NOTE FOR FM T-TYPE ANTENNA:
Stretch the antenna out to its full length, and affix it to a wall, etc.

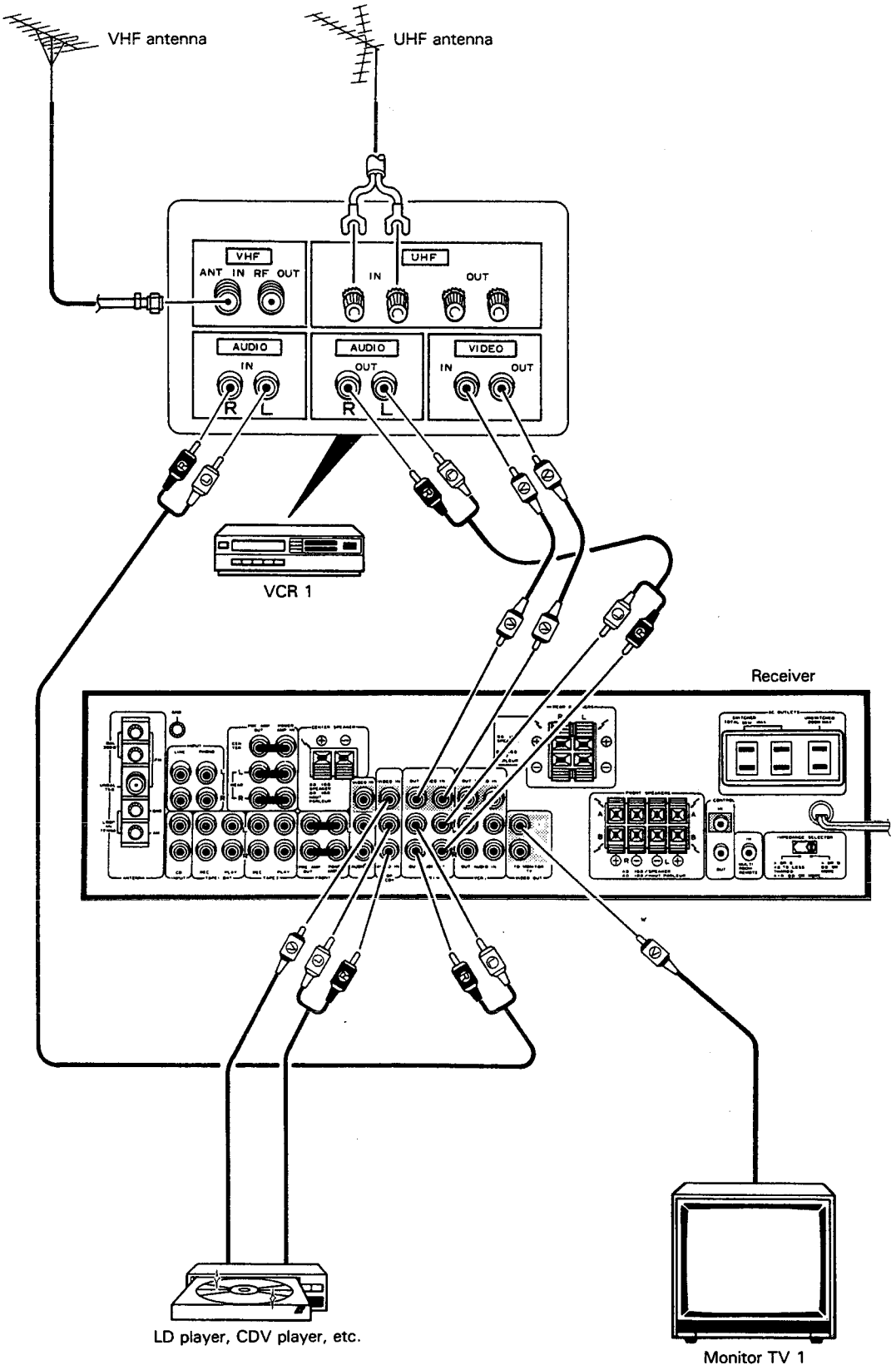
NOTE FOR AM LOOP ANTENNA:
The antenna should be placed at a distance from the receiver, and should not be allowed to touch metallic objects.
Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.



CONNECTING THE POWER CORD
(For U.S. and Canadian models)

Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.

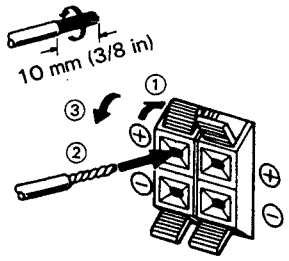
BASIC VIDEO SYSTEM CONNECTIONS



SPEAKER CONNECTIONS

Speaker cord connection

① Push the knob.
② Insert the cord.
③ Pull the knob.



FRONT

Left Channel

Center channel

Right Channel

Receiver

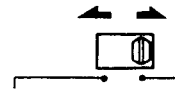
Left Channel

Right Channel

REAR

IMPEDANCE SELECTOR

Set to match the impedance of the speakers being used. (See page 17.)

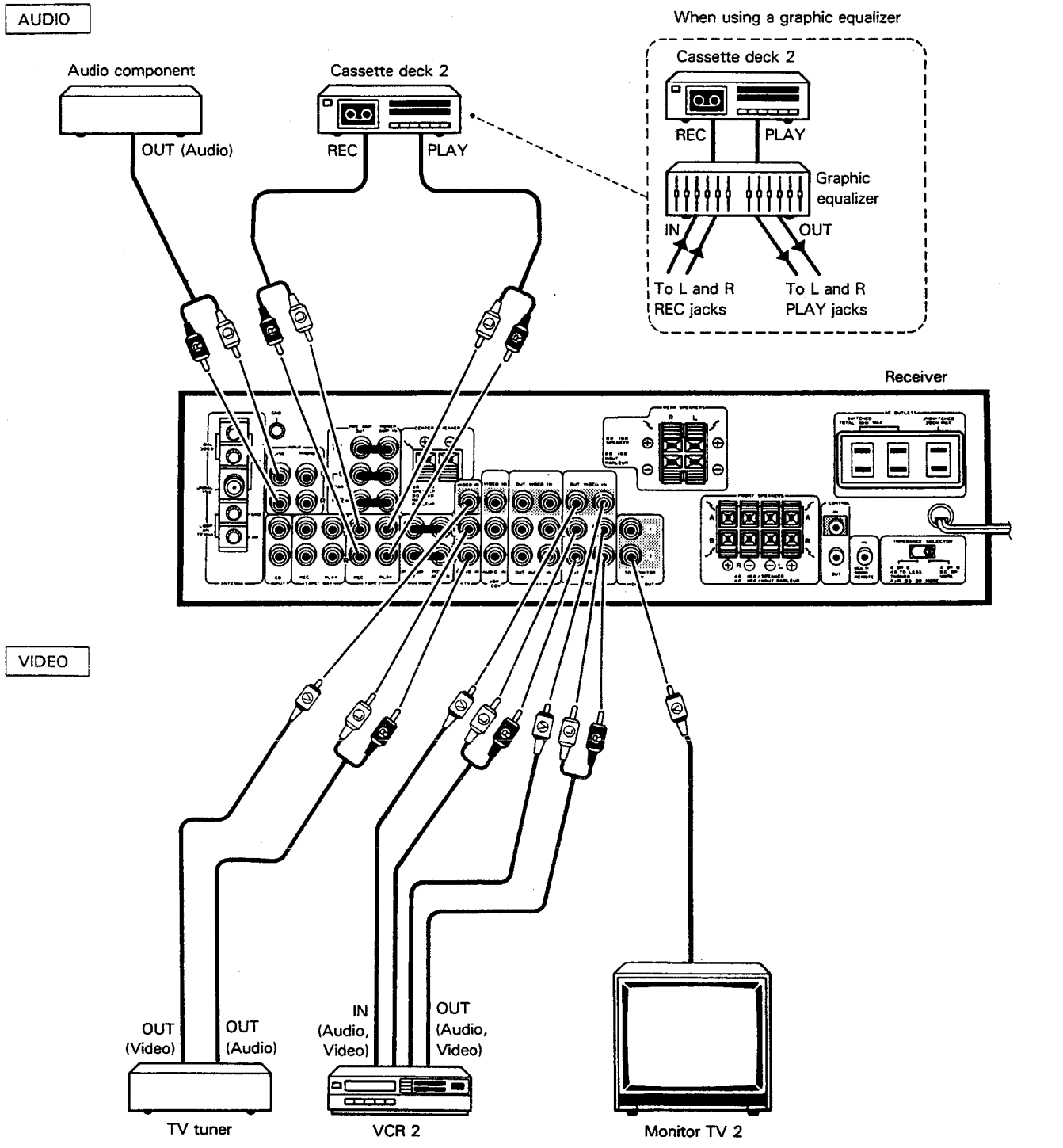


A OR B:	A OR B:
4 Ω TO LESS THAN 8 Ω	8 Ω OR MORE
A + B: 8 Ω OR MORE	

APPLICATIONS

When using with other audio or video components.

Note:
Dolby Surround will not operate correctly if the signal passes through a graphic equalizer.
When using Dolby Surround, turn off the TAPE 2 MONITOR button or set the graphic equalizer for flat response or to its "through" (or off) setting, if you have one in use.



APPLICATIONS

When used with another amplifier (power amplifier, pre-amplifier)

[FRONT]

(a)
When using the pre-amplifier of the receiver and using a separate stereo power amplifier to increase power.

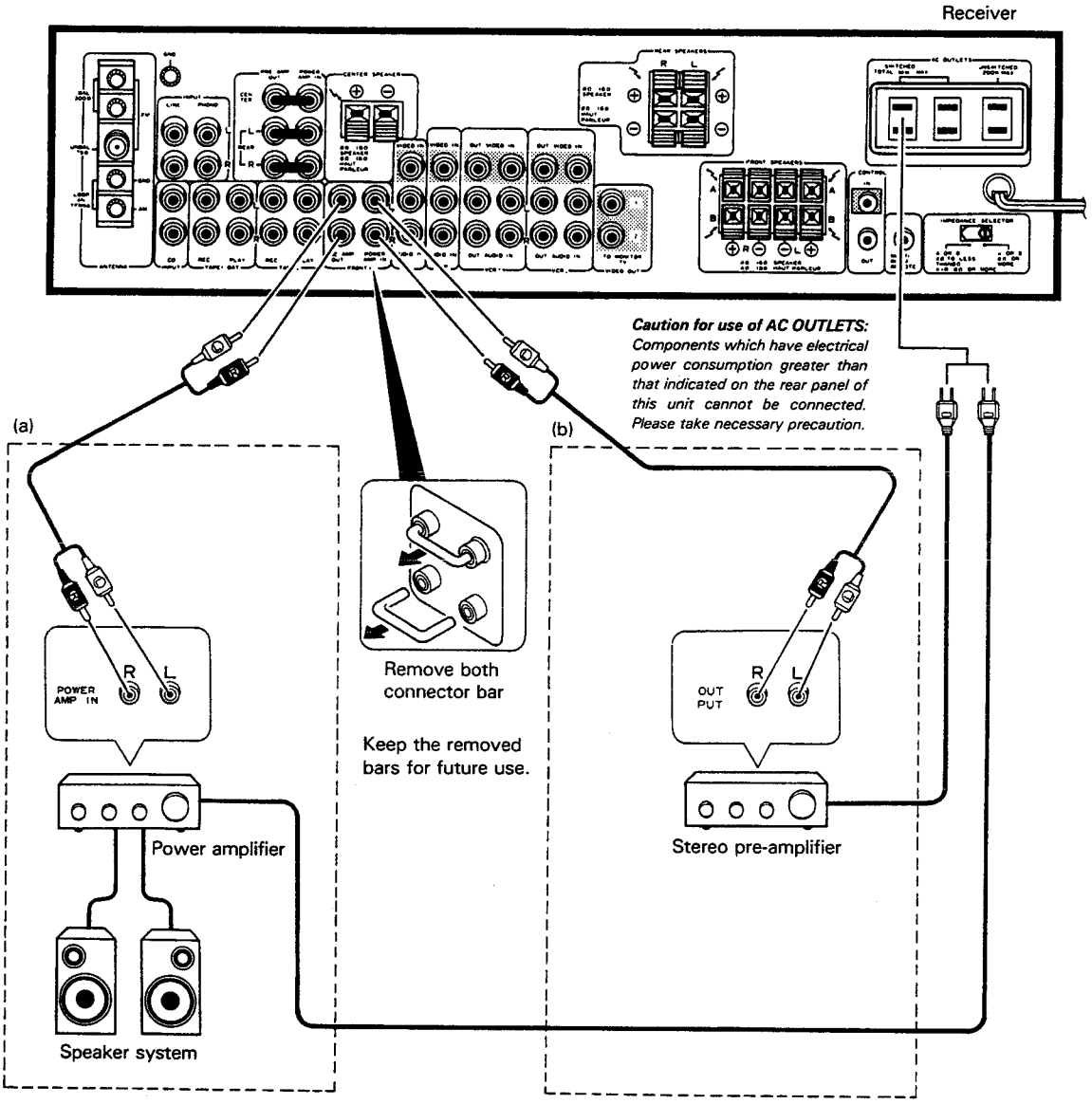
(b)
When using the power amplifier of the receiver and using a separate stereo preamplifier.

When using PRE AMP OUT jacks:
Use these jacks when using a separate amplifier as the power source instead of this units, and listening to speakers which are connected to the separate amplifier.

NOTE:
Sound from the speaker channels (front, center, rear) from which the connector bars have been removed in order to make a connection cannot be heard if the speakers are connected to the unit.

When using POWER AMP IN jacks:
Use these jacks when this unit is being used as the power amplifier for the surround channels (front, center, rear).
With separate surround processing components, each corresponding channel (front, center, rear) which has a sound output should be connected correspondingly.

NOTE:
When the connector bars are removed to make connections, sound from all channels of separate components connected to this unit's input terminals, as well as broadcasts received by the unit become unable to be heard via speakers connected to the unit.

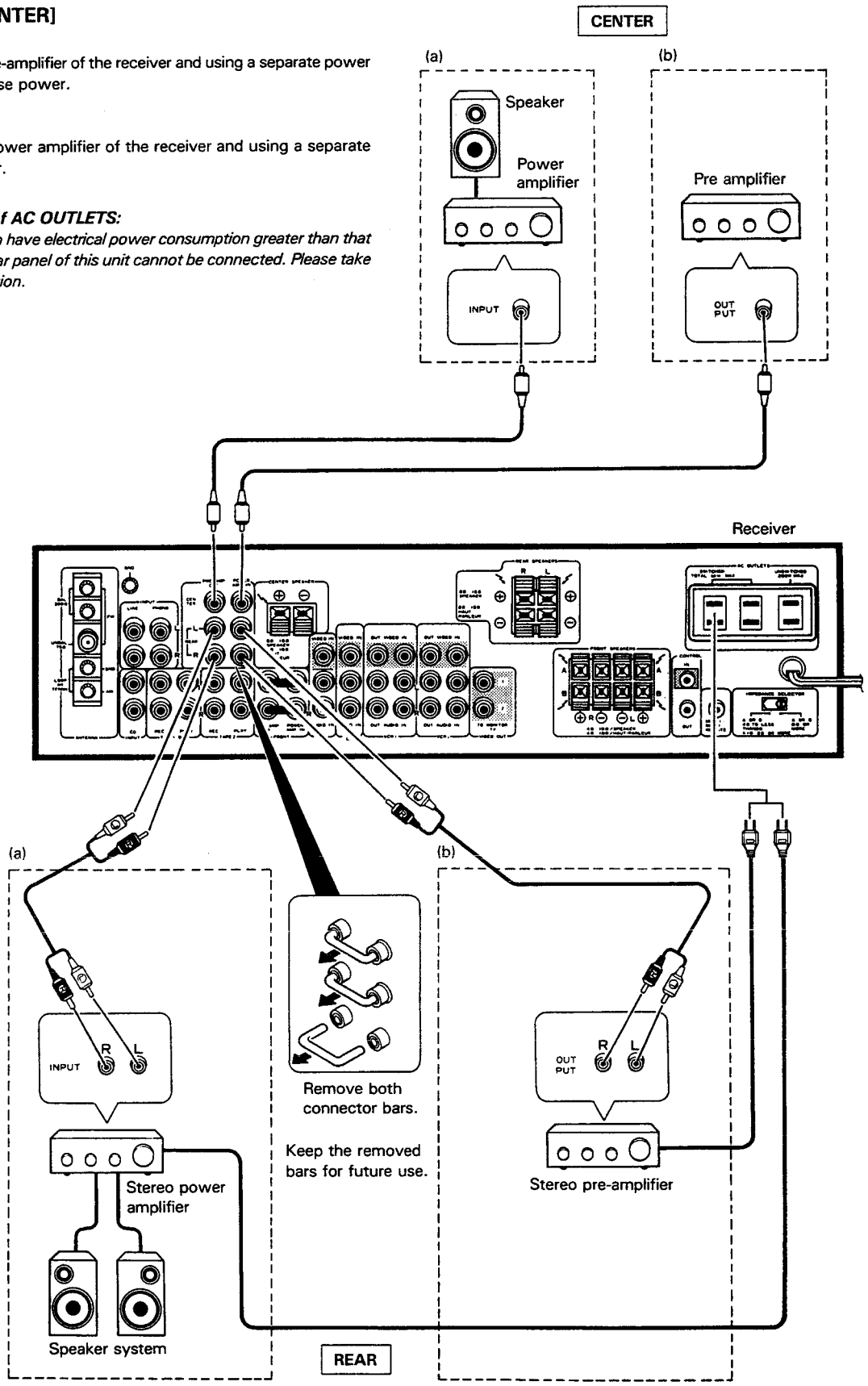

Receiver
Caution for use of AC OUTLETS:
Components which have electrical power consumption greater than that indicated on the rear panel of this unit cannot be connected. Please take necessary precaution.
(a)
(b)
POWER AMP IN
R
L
Remove both connector bar
Keep the removed bars for future use.
OUT PUT
Power amplifier
Stereo pre-amplifier
Speaker system

[REAR and CENTER]

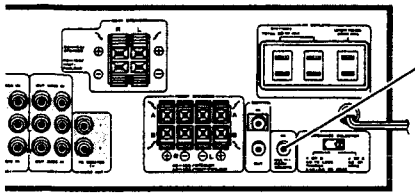
(a)
When using the pre-amplifier of the receiver and using a separate power amplifier to increase power.

(b)
When using the power amplifier of the receiver and using a separate stereo preamplifier.

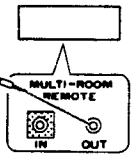
Caution for use of AC OUTLETS:
Components which have electrical power consumption greater than that indicated on the rear panel of this unit cannot be connected. Please take necessary precaution.



OPTIONAL MULTI-ROOM CONTROL ADAPTOR CONNECTION



Multi-Room Remote control unit MR-100 (option)

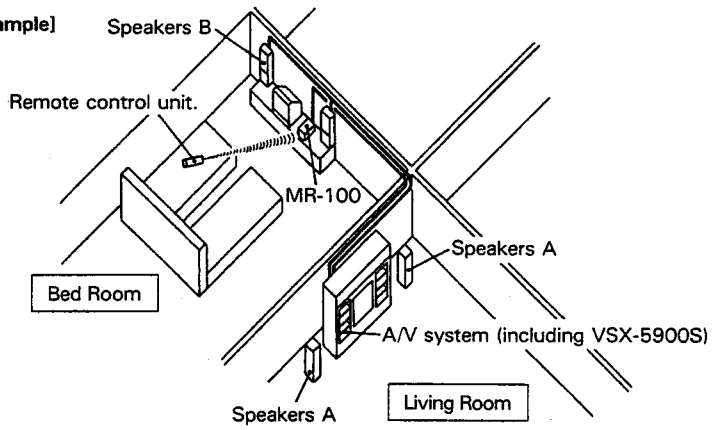


- For details, see operating instructions for multi-room remote control unit MR-100.

NOTE:

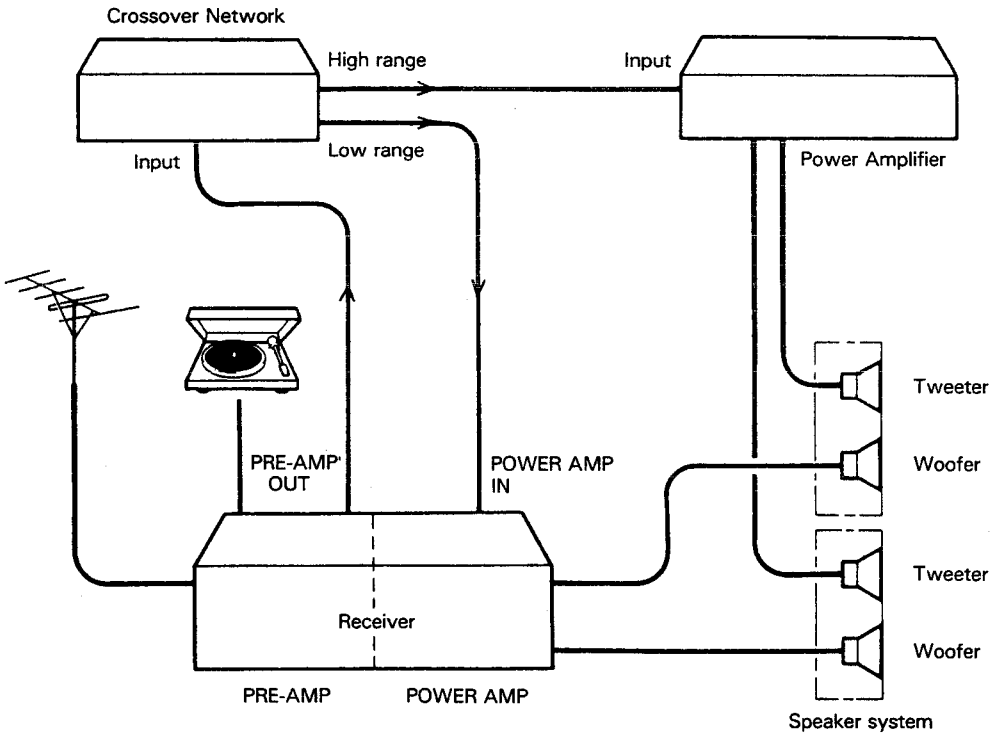
Be careful not to make the wrong connections for CONTROL IN/OUT (black) and MULTI-ROOM REMOTE IN (green).

[Set-up example]



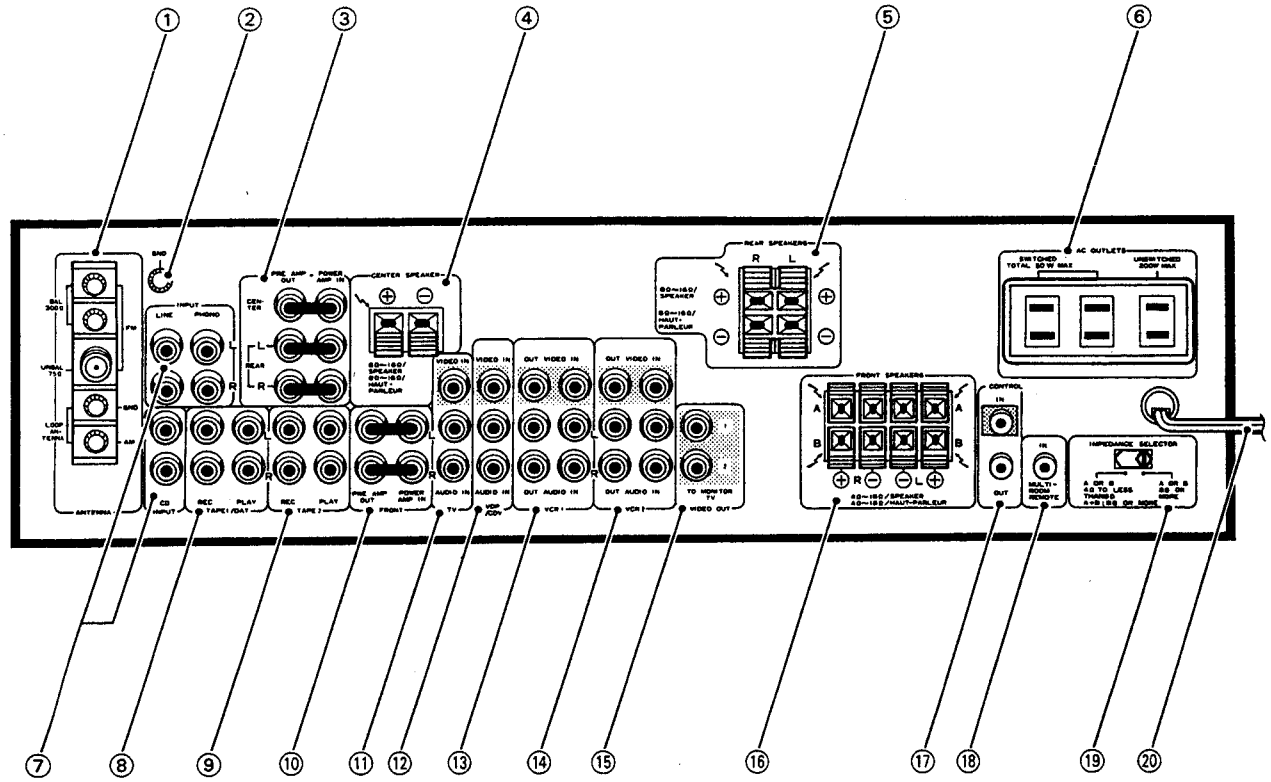
You can operate the main system by remote control from a different room in which are installed a speaker system or monitor TV set if you also install a Multi-Room remote control unit in that room.

Application example - MULTI-AMPLIFIER SYSTEM



REAR PANEL FACILITIES

* Illustration shows U.S. model.



① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts.

② GND terminal

Connect the turntable ground lead to this terminal.

③ CENTER, REAR PRE AMP OUT and POWER AMP IN jacks

[CENTER PRE AMP OUT]
When a separate power amplifier is used to drive the center speaker, connect the power amplifier to this jack.
[CENTER POWER AMP IN]
When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to this jack.
[REAR PRE AMP OUT]
When a separate power amplifier is used to drive the rear speakers, connect the power amplifier to these jacks.
[REAR POWER AMP IN]
When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

④ CENTER SPEAKER terminals

Connect the center speaker to these terminals.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.
Use center speaker of impedance 8 Ω — 16 Ω.

⑤ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.
Use rear speakers of impedance 8 Ω — 16 Ω.

⑥ AC OUTLETS

[U.S. and Canadian models]
SWITCHED TOTAL 50 W MAX
Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 50 W.

UNSWITCHED 200 W MAX
Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W.
The equipment should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

[Multi-voltage model]
SWITCHED TOTAL 100 W MAX
Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.
UNSWITCHED 200 W MAX
Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W.
The equipment should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

NOTE:
Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.
This can cause the receiver to malfunction.

⑦ INPUT jacks

PHONO ..... Connect to the output cables from a turntable.
LINE ..... Connect to the out put jacks of an audio component.
CD ..... Connect to the output jacks of a compact disc player.

⑧ TAPE 1/DAT jacks

Use these to connect a first cassette deck or DAT (digital audio tape deck).
Connecting for Recording
The tape recording jack (REC) on the cassette deck or DAT should be connected to the REC side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.
Connecting for Playback
Connect the PLAY jack on the cassette deck or DAT to the PLAY side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

⑨ TAPE 2 jacks

Connect a second cassette deck to these jacks.
Connecting for Recording
The tape recording jack (REC) on the cassette deck should be connected to the REC side of the TAPE 2 jack on the receiver with a pin plug connecting cord.
Connecting for Playback
Connect the PLAY jack on the cassette deck to the PLAY side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

⑩ FRONT PRE AMP OUT and POWER AMP IN jacks

[PRE AMP OUT]
When a separate power amplifier is used to drive the front speakers, connect the power amplifier to these jacks.
[POWER AMP IN]
When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

⑪ TV jacks

Use these jacks if you wish to connect a TV tuner having both video and audio outputs.
[VIDEO IN]
Connect the TV tuner's VIDEO OUTPUT to this jack.
[AUDIO IN (L, R)]
Connect the TV tuner's AUDIO OUTPUT to these jacks.

⑫ VDP/CDV jacks

[VIDEO IN]
When watching the video image from a LD player (VDP) or a CDV player, connect its VIDEO OUTPUT jacks here.
[AUDIO IN (L, R)]
When playing back the audio channel from a LD player (VDP) or a CDV player, connect its AUDIO OUTPUT jacks here.

⑬ VCR 1 jacks

[VIDEO OUT]
Connect to the VIDEO INPUT jacks of the first VCR.
[AUDIO OUT (L, R)]
Connect to the AUDIO INPUT jacks of the first VCR.
[VIDEO IN]
Connect to the VIDEO OUTPUT jack of the first VCR.
[AUDIO IN (L, R)]
Connect to the AUDIO OUTPUT jacks of the first VCR.

⑭ VCR 2 jacks

[VIDEO OUT]
Connect to the VIDEO INPUT jacks of the second VCR.
[AUDIO OUT (L, R)]
Connect to the AUDIO INPUT jacks of the second VCR.
[VIDEO IN]
Connect to the VIDEO OUTPUT jack of the second VCR.
[AUDIO IN (L, R)]
Connect to the AUDIO OUTPUT jacks of the second VCR.

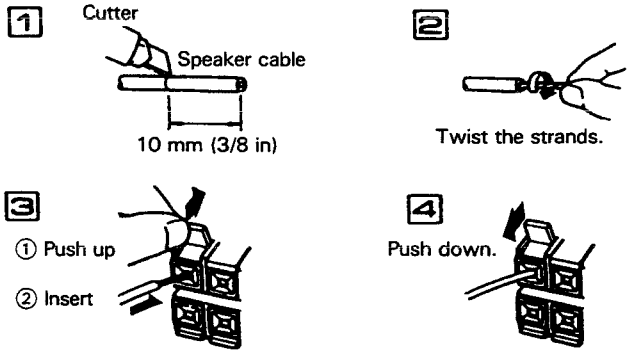
⑮ VIDEO OUT TO MONITOR TV jacks

Connect to monitor TV or to TV sets with video input terminals for watching program materials from a VCR or VDP/CDV connected to this unit.

⑯ FRONT SPEAKERS terminals

A: Connect to a first set of speakers.
B: Connect to a second set of speakers.

Speaker lead wire preparation and connection.



NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.
Use speakers of impedance 4 Ω– 16 Ω. Also set the IMPEDANCE SELECTOR switch to match the impedance of your speakers.

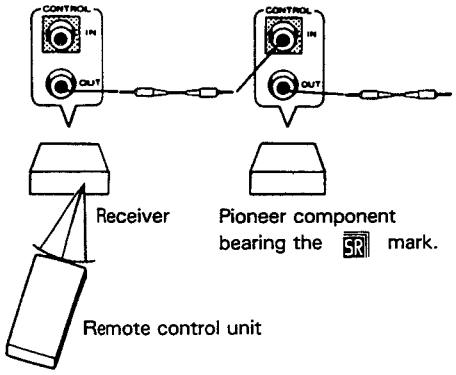
⑰ CONTROL IN/OUT jacks

IN: Connect this jack to other Pioneer components (main unit or remote control unit) when using those components to control this unit.

OUT: Connect this jack to other Pioneer components when using the remote control of this unit to control the other components.

NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.

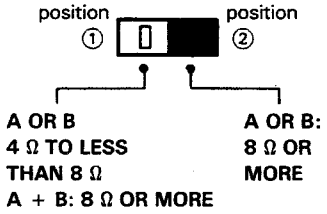


⑱ MULTI-ROOM REMOTE IN jack

Connect the adaptor (MR-100, sold separately) to this jack. You can operate the unit by remote control through the adaptor. It is convenient when the unit is located in a separate room.

⑲ IMPEDANCE SELECTOR switch

Set this switch to match the impedance of your speakers.



• When using a pair of speakers:

Impedance of a speaker	Selector position
4 Ω to less than 8 Ω	①
8 Ω or more	②

• When using two pairs of speakers:

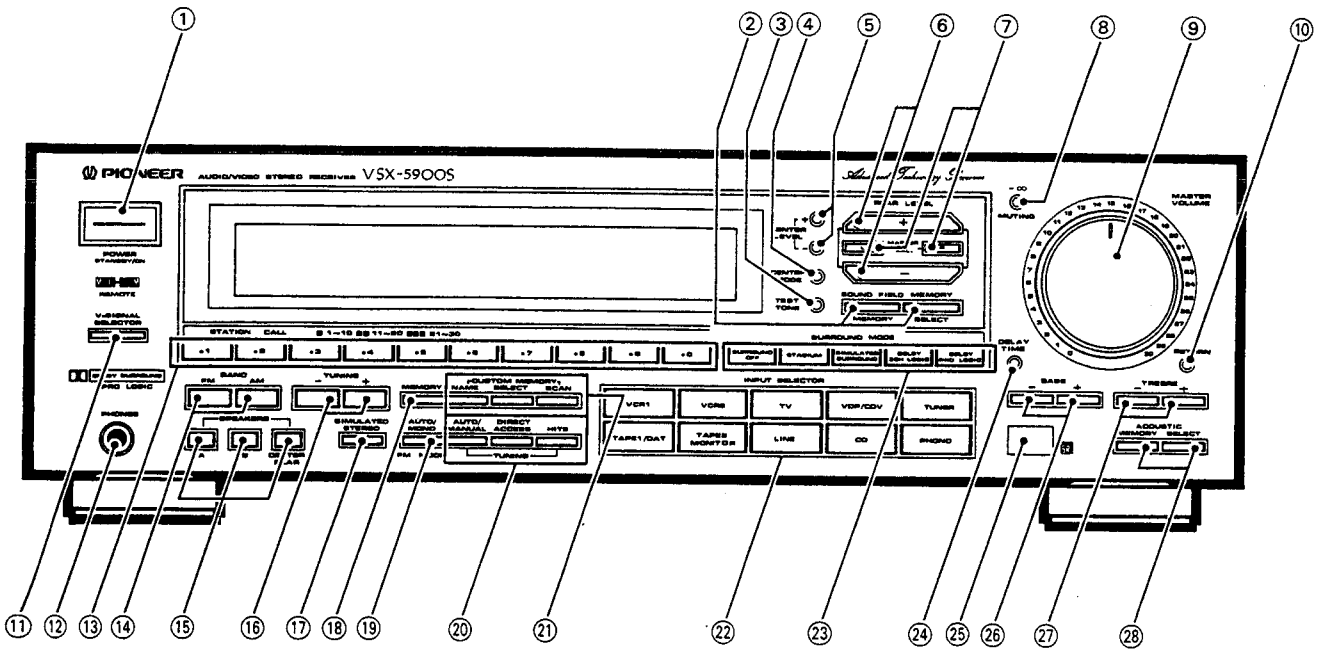
Select ① as the selector switch position and use speakers having impedance of 8 Ω or more.

NOTE:

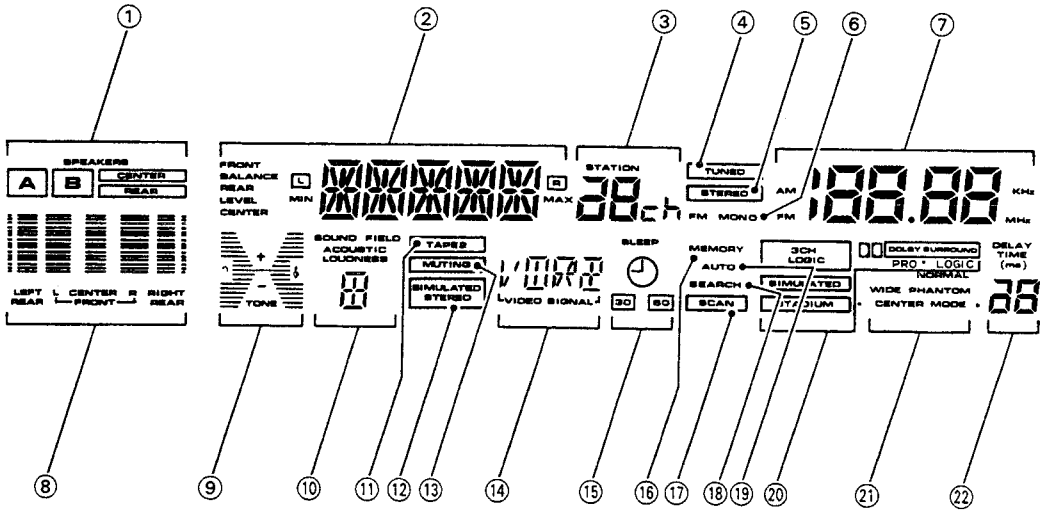
Turn off the receiver's power before changing the impedance selector switch setting.

⑳ Power cord

FRONT PANEL FACILITIES



DISPLAY SECTION



① POWER STANDBY/ON switch

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.
On the multi-voltage model, the indicator on the MASTER VOLUME control knob lights during STANDBY.

[TIMER ON/OFF possible]
When the unit is switched ON, ON/OFF control can be performed by means of the optional timer.

NOTE:
When the power is initially turned ON, muting will be applied to prevent sound from being output for about 5 seconds.

② SOUND FIELD MEMORY buttons

MEMORY:
Pressing this button will result in the memorization of the sound field condition. Press again to cancel this mode.

SELECT:
- This button is used to preset the five sound field memories (A—E).
- This button is also used to recall previously set sound field settings. Each time you press the button, the sound field setting advances in the order shown below.

P → A → B → C → D → E

P: The sound field setting previously memorized in the unit.

③ TEST TONE button

Operates when the DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC mode is selected. When the button is turned ON, "TEST" appears on the display section and a test tone approximately two seconds in duration is generated in all channels in succession.

④ CENTER MODE button

This operates if DOLBY PRO LOGIC SURROND or DOLBY 3CH LOGIC is ON. The setting changes in the order listed below each time you press the button.

NORMAL – Use this setting when a small enclosure center channel speaker incapable of reproducing frequencies below 100Hz is connected.

PHANTOM — Use this setting when no center channel speaker is connected (DOLBY PRO LOGIC SURROUND).

WIDE — Use this setting when a large enclosure center channel speaker capable of reproducing frequencies below 100Hz is connected.

NOTE FOR DOLBY PRO LOGIC SURROUND:
- *If no center speaker is used, then mono signals and center channel signal components will not be reproduced at positions other than the PHANTOM position.*

⑤ CENTER LEVEL (+, –) buttons

Use these buttons to adjust the center speaker sound level to the level of the front speakers.
Operate when DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC mode is on.
After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.
– : Lowers the center speaker sound level.
+ : Raises the center speaker sound level.

⑥ REAR LEVEL (–, +) buttons

Operate only when the surround mode is on.
These buttons are used to preset the sound level difference between the front and rear speakers. In this way, after presetting the difference, the overall volume of the front and surround speakers can be changed using the MASTER VOLUME control, while still maintaining the sound volume differential.
– : Rear speaker volume is reduced.
+ : Rear speaker volume is increased.
Press – and + together to restore front and surround to the default volume balance setting.

⑦ MASTER BAL buttons

Use them to adjust the sound balance between left and right speakers.
L: Press to decrease the sound on the right side.
R: Press to decrease the sound on the left side.
Press L and R together to bring the volume balance back to center.

⑧ MUTING button

Press to temporarily cut off the sound volume. The display section MUTING indicator will flash. When pressed again, the sound will return to its previous level.

⑨ MASTER VOLUME control

Use it to simultaneously adjust the sound volume from the front, center and rear speakers.
When you adjust volume by remote control, the indicator above the knob flashes.

⑩ RETURN button

Pressing this button returns the receiver to the following settings, the sound level being controlled by MASTER VOLUME control knob.
- TAPE 2 MONITOR OFF
- SURROUND MODE OFF
- MUTING OFF
- BALANCE CENTER
- INPUT SELECTOR TUNER
- STATION CALL 1 CH*

* When a station is not memorized in 1 CH, station search will automatically proceed from the frequency displayed.

NOTE:
If no sound is output after the RETURN button is pressed, make sure that SPEAKERS buttons are turned on.

⑪ V-SIGNAL (VIDEO SIGNAL) SELECTOR button

When recording simulcast programs, the recorded image can be selected from among VCR 1, VCR 2, VDP and TV.

VCR 1 → VCR 2 → VDP → TV → OFF

The current setting is shown by an indicator on the display section.

⑫ PHONES jack

Connect the plug on your headphones to this jack. Set all SPEAKERS A, B and CENTER/REAR buttons to OFF if you want to cut the sound from speakers and listen to it only through the headphones.

⑬ STATION CALL buttons

Up to 30 FM or AM stations can be preset at random.
These buttons are used to preset and recall desired broadcasting stations, FM AUTO/MONO mode.

NOTE:

Pressing a BAND selector button or STATION CALL button will select TUNER as the source, regardless of what other listening source or function was selected.

⑭ BAND selector buttons

FM: Press for FM reception.
AM: Press for AM reception.

⑮ SPEAKERS buttons (A, B, CENTER/REAR)

ON/OFF buttons for the A, B and CENTER/REAR speaker systems. An indicator on the display section lights when any of these buttons is set to ON.

⑯ TUNING buttons

+: Performs tuning from the currently displayed station frequency in ascending frequency order.
−: Performs tuning in order to descending frequencies.

⑰ SIMULATED STEREO button

Press to produce a simulated stereo effect when listening to monaural sources (for example, normal AM or TV broadcasts).
"SIMULATED STEREO" appears on the display section.

NOTE:

- *This effect is not produced through the rear speakers.*
- *Use with the SURROUND MODE in the SIMULATED SURROUND position or OFF position (There is no effect in the STADIUM, DOLBY 3CH LOGIC and DOLBY PRO LOGIC SURROUND positions). With a monaural source, it is more effective if used together with SIMULATED SURROUND.*

⑱ MEMORY button

When the unit is in the frequency display mode, pressing this button will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.
This button is also used to input custom memory names (see page 24).

⑲ FM MODE AUTO/MONO selector button

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.

Auto stereo mode:
Normally, leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo.

Monaural mode:
When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:

This button has no effect on reception of AM broadcasts.

⑳ TUNING buttons

AUTO/MANUAL TUNING selector button:

This button is used to select the tuning mode. The AUTO indicator lights when the AUTO tuning mode has been selected.

AUTO tuning
When the − or + TUNING button is pressed, the receiver automatically scans the broadcast station frequencies. When a broadcast is detected, the scanning stops at that frequency.

NOTE:

Pressing the TUNING button (− or +) while scanning is taking place causes scanning to stop.

MANUAL tuning
This lets you manually tune to particular broadcast frequencies. Each press of the + or − button raises or lowers the frequency by one tuning step. For continuous scanning, keep the button pressed, then release it to stop scanning.

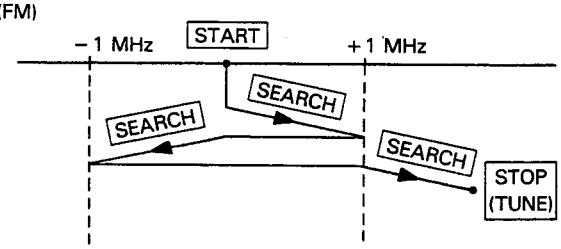
DIRECT ACCESS TUNING button:

When this button is pressed, the STATION CALL buttons function as ten-key number buttons for direct input of the desired reception frequency. Press again to cancel this mode.
If the input station falls outside of the receiver's tuning range, the display section will display a message: "UPPER" if the frequency is too high and "LOWER" if it is too low (see page 22).

HITS (Hyper Intelligent Tuning System) button:

- If the HITS button is pressed during input of numbers for DIRECT ACCESS tuning, the receiver sets the remaining digits which have not yet been input to "0," searches for the corresponding frequencies, and stops on the first station it finds.
- If the HITS button is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station (The SEARCH indicator in the display section lights at this time.) and stops at the first one it finds.

(FM)



NOTE:

- *The system searches for stations within successive 1 MHz ranges for FM and 100 kHz ranges for AM. During DIRECT ACCESS tuning, it searches up and down for a station until it reaches the edges of the band. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS button was pressed.*
- *If the upper (or lower) frequency limit of the receiver is encountered during HITS operation, the receiver stops searching in that direction but continues to search in the other.*

㉑ CUSTOM MEMORY buttons

Stations can be assigned to STATION CALL buttons according to the genre of material broadcast (for example, ROCK, JAZZ, etc.). You can recall a particular genre, and scan all the stations of that genre with Memory Scan until you reach the desired one.
The initial settings are ROCK, POP, JAZZ, NEWS, and PARTY.

NAME button

Change the name of a genre with this button.

SELECT button

Recall a genre name with this button.

SCAN button

Use this button to carry out Memory Scan within a genre recalled with the SELECT button.
If it is pressed when "TUNER" is displayed, Memory Scan of successive STATION CALL NUMBERS and not genre will occur.

㉒ Audio/Video INPUT SELECTOR buttons

VCR 1: Press when performing playback on a VCR unit.
VCR 2: Press when performing playback on a second VCR unit.
VDP/CDV: Press when performing playback on a video disc player (VDP) or CD CDV LD player.
TV: Press to watch TV broadcasts from the TV tuner connected to the rear panel TV jacks.
LINE: Press when performing playback on an audio component connected to the LINE jacks.
TAPE 1/DAT: Press when performing playback on a DAT or cassette deck.
TAPE 2 MONITOR: Press when performing playback on a second cassette deck or second DAT and when monitoring recording.
CD: Press when playing compact discs on a CD player.
TUNER: Press when listening to radio broadcasts.
PHONO: Press when playing records on turntable.

㉓ SURROUND MODE selector buttons

STADIUM:
Ideal for sports broadcasts, etc.
SIMULATED SURROUND:
Select this setting when listening to music or a monaural source, etc. With a monaural source, a much better surround effect is achieved if it is used together with SIMULATED STEREO.
DOLBY 3CH LOGIC:
This mode is suitable for when stereo-source regeneration and rear speakers are not connected and you wish to use the front L, front R, and center speakers to enjoy audio/visual material bearing the DOLBY SURROUND mark.
DOLBY PRO LOGIC SURROUND:
Select this setting when watching video tapes or video discs bearing the DOLBY SURROUND mark.

㉔ DELAY TIME button

Operates only when the surround mode is on.
[DOLBY PRO LOGIC SURROUND]
Switches the surround delay time in 4 steps.

15 ms → 20 ms → 25 ms → 30 ms

For DOLBY PRO LOGIC SURROUND, 20 ms is standard.

[STADIUM and SIMULATED SURROUND]
Switches the surround delay time in 7 steps.

5 ms → 10 ms → 15 ms → 20 ms → 25 ms → 30 ms → 35 ms

NOTE:
In DOLBY 3CH LOGIC, the DELAY TIME button has no effect.

㉕ Remote sensor

㉖ BASS control buttons

Use to adjust the low-frequency level. Press the + button to increase low-frequency level, and the − button to decrease it.
The TONE indicator appears on the display section.
When both buttons (+, −) of the BASS control are pressed simultaneously, the bass response will be set to the flat (normal) condition.

㉗ TREBLE control buttons

Use to adjust the high-frequency level. Press the + button to increase high-frequency level, and the − button to decrease it.
The TONE indicator appears on the display section.
When both buttons (+, −) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition.

㉘ ACOUSTIC buttons

MEMORY:
Pressing this button will result in the memorization of the sound quality (tone control condition). Press again to cancel this mode.
SELECT:
- This button is used to preset the five acoustic memories (A—E).
- This button is also used to recall previously set sound quality settings. Each time you press the button, the sound quality setting advances in the order shown below.

No indication (FLAT) → LOUDNESS → A → B → C → D → E

No indication (FLAT): For flat (normal) frequency response.
LOUDNESS: Emphasizes the low- and high- frequency ranges. Produces a fuller sense of sound, particularly when listening at low volume.
A—E: Memorized acoustic memory settings.

DISPLAY SECTION

① SPEAKERS indicators

Shows which speaker system (or systems) are switched ON.

② CHARACTER/LEVEL/BALANCE display

This displays the name of the component selected with the INPUT SELECTOR. It also displays the level and balance settings during adjustment.

③ STATION No. display

Shows the channel selected with the STATION CALL buttons.

④ TUNED indicator

Lights up when a station is tuned in during TUNER operation.

⑤ STEREO indicator

Lights up when a stereo FM broadcast is being received.

⑥ FM MONO indicator

Lights up when the FM MONO mode is selected with the FM MODE button.

⑦ Frequency display

⑧ Level meter

⑨ TONE level indicator

Shows the settings of the BASS and TREBLE buttons.

⑩ SOUND FIELD/ACOUSTIC display

Shows the setting of the SOUND FIELD and ACOUSTIC.

⑪ TAPE 2 indicator

Lights up when the INPUT SELECTOR is set to TAPE 2 MONITOR ON.

⑫ SIMULATED STEREO indicator

⑬ MUTING indicator
Flashes when MUTING in ON.

⑭ VIDEO SIGNAL SELECTOR indicators
Shows the video component selected with the VIDEO SIGNAL SELECTOR button.

⑮ SLEEP timer indicators
Shows the SLEEP timer setting (the length of time from the set time to the point at which power will switch off). (The sleep timer can be operated via the remote control.)

⑯ MEMORY indicator

⑰ SCAN indicator
Lights up during memory scan operation.

⑱ SEARCH indicator

⑲ AUTO TUNING indicator
Lights up when in the auto tuning mode.

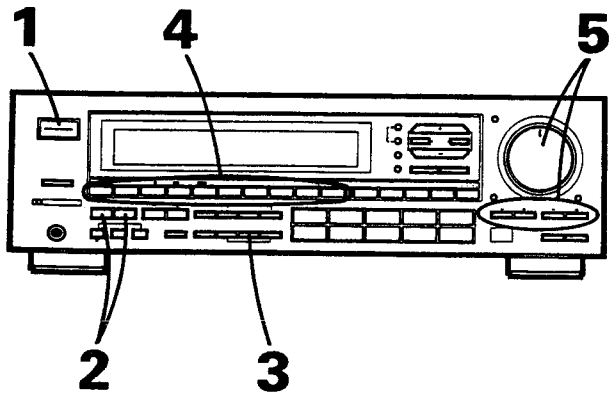
⑳ SURROUND MODE indicators

㉑ DOLBY PRO LOGIC SURROUND/DOLBY 3CH LOGIC CENTER MODE indicator
Displays the mode selected with the CENTER MODE button.

㉒ DELAY TIME display
Shows the delay time during surround operation.

BROADCAST RECEPTION

DIRECT ACCESS TUNING



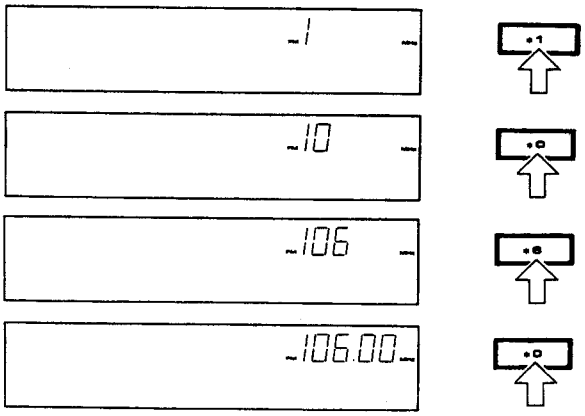
When you know the frequency of the desired station, the frequency can be input directly using the STATION CALL (number) buttons in the following way:

1. **Press the POWER switch to the ON position.**

NOTE:
Be sure to turn the TAPE 2 MONITOR button OFF when listening to AM or FM broadcasts.

2. **Select either FM or AM using the BAND selector button.**
3. **Press the DIRECT ACCESS button.**
4. **Input the desired station frequency using the STATION CALL buttons.**

Example 1: To receive FM 106.00 MHz



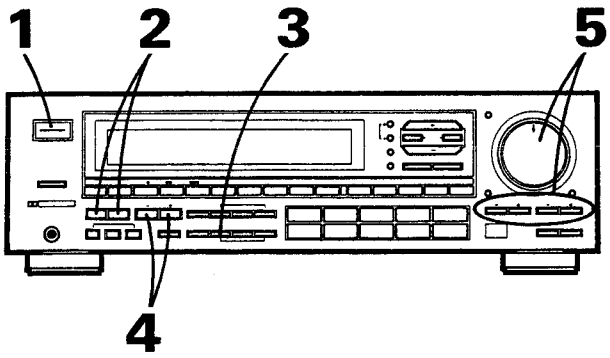
Once the station frequency has been input, the receiver tunes in that frequency. If the input frequency falls below the lower or higher limit of the receiver's receivable frequency range "LOWER" or "UPPER" is displayed, indicating that the frequency which has been input cannot be tuned in.

5. **Adjust the sound volume and tone as desired.**

To cancel frequency input
Direct access is canceled when the DIRECT ACCESS button is pressed again.
Under the following conditions direct access is canceled and the unit returns to the condition in effect before direct access was selected:
① If there is no key input for about five seconds after the DIRECT ACCESS button was pressed.
② If more than about five seconds elapse between number input.

Notes regarding direct access tuning (When FM reception)
- There is no need to input the last digit "0" of the desired station frequency.
  On the multi-voltage model, it is necessary to input the last digit of the desired station frequency when the channel step switch is set at the 50 kHz/9 kHz position.

AUTO OR MANUAL TUNING



AUTO tuning:
Auto tuning is convenient when you do not remember the frequency of a desired station, or when you wish to find stations that you do not normally listen to.
MANUAL tuning:
Each time the TUNING button "+" or "−" is pressed, the tuning frequency changes by one step, allowing you to find stations manually.

1. **Press the POWER switch to the ON position.**

NOTE:
Be sure to turn the TAPE 2 MONITOR button OFF when listening to AM or FM broadcasts.

2. **Use the BAND selector button to choose either FM or AM.**

For AUTO tuning:

3. **Set the AUTO/MANUAL button to the auto-tuning mode.**
   - In the Auto Tuning mode, the AUTO indicator will light.
4. **Press the "+" or "−" of the TUNING buttons.**
   - Pressing "+" causes scanning to take place in the direction of increasing frequency. Pressing "−" causes scanning to take place in the direction of decreasing frequency.
   - When a station is received, scanning will stop (the TUNED indicator lights). If you wish to receive a different station, press the TUNING button "+" or "−" again.
   - When the received station is broadcasting a program in FM stereo, the STEREO indicator will light.
   - Pressing either of the TUNING (−, +) buttons during auto tuning causes tuning to stop at the current frequency.

For MANUAL tuning:

3. **Set the AUTO/MANUAL button to the manual tuning mode.**
   - When in the Manual Tuning mode, the AUTO indicator will go out.
4. **Press the "+" or "−" of the TUNING button as necessary to set to the frequency of the desired station.**
   Each time the button is pressed, the tuning frequency will change by one step in the direction corresponding to the button pressed. When keep depressed, the receiver continues scanning until it is released.
   - When a station is received, the TUNED indicator will light up.
   - When the received station is broadcasting a program in FM stereo, the STEREO indicator will light up.

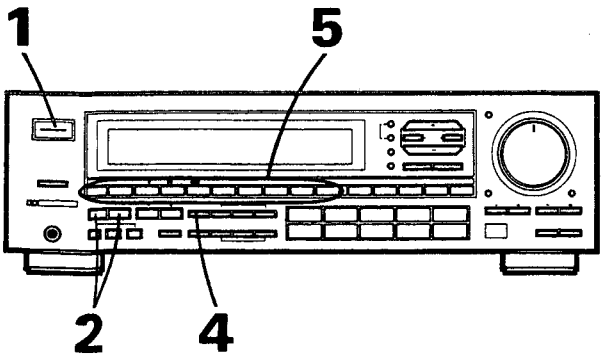
5. **Adjust the volume and tone as desired.**

NOTE:
- *When Auto Tuning is used, correct reception may not be possible for very distant stations or stations with very weak signals. In this event, Manual Tuning is recommended.*
- *The TUNED indicator may not light with broadcasts received over long distances, or when the broadcast signals are extremely weak.*

PRESET TUNING

FREQUENCY PRESETTING

Allows three stations per STATION CALL button (press once, twice, or three times to select).



1. **Press the POWER switch to the ON position.**

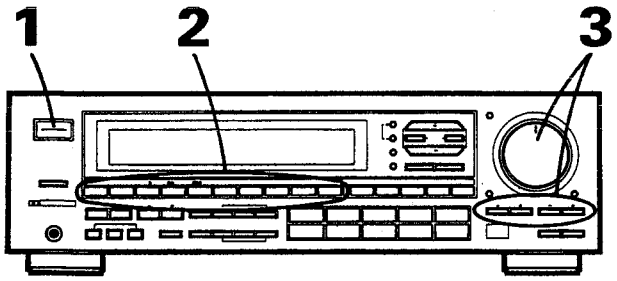
NOTE:
Be sure to turn the TAPE 2 MONITOR button OFF when listening to AM or FM broadcasts.

2. **Use the BAND selector button to choose either FM or AM.**

3. **Tune in the desired station.**
   - See the section "DIRECT ACCESS TUNING" for information on reception using the Direct Access Tuning mode.
   - See the section "AUTO TUNING" for information on reception using the Auto Tuning mode.
   - See the section "MANUAL TUNING" for information on reception using the Manual Tuning mode.
   In addition to station frequencies, the FM MODE (AUTO/MONO) can also be preset.
4. **Press the MEMORY button.**
5. **Press the STATION CALL button into which you wish to preset the station.**
   - Use the STATION CALL buttons (*1 — *9, *0) to select a preset channel. One press selects the 1 — 10 range, two presses 11 — 20, and three presses 21 — 30.

   [Example] If you press button *3 :
   Once — STATION 3
   Twice — STATION 13
   Three times — STATION 23
   Press a STATION CALL button within two seconds.
6. **Repeat steps 2 to 5 to preset additional stations.**
   Total of 30 AM and FM stations may be preset. When you store a new preset, it takes the place of the previously stored station (if any).

LISTENING TO BROADCASTS USING PRESET TUNING



1. **Press the POWER switch to the ON position.**
2. **Press the STATION CALL button into which the desired station has been preset.**
   - When the INPUT SELECTOR is set to a function other than TUNER, it will switch to the TUNER function automatically if one of the STATION CALL buttons is pressed.
     Tuning can be performed simply and accurately following the above procedure.
3. **Adjust the volume and tone as desired.**

NOTE:

The contents of the STATION CALL buttons will be preserved for several days, even if the receiver power cord is unplugged.
If a preset station has been erased, preset it again.

Last station memory

When the POWER switch is pressed to turn power on, the last station received before the power was previously turned off will be tuned in again.
When the power is ON, if one of the BAND selector buttons is pressed, the last station received before the BAND selector button was previously pressed will be tuned in again.

HOW TO USE THE CUSTOM MEMORY

Preset stations can be classified into as many as five different genres according to the material played by the station. Each of these five genres can be given a name, and Memory Scan of all the stations of a particular genre can be carried out.

The initial STATION CALL NUMBERS are classified and named as follows.

STATION CALL NO.	NAME
1 – 6	ROCK
7 – 12	POP
13 – 18	JAZZ
19 – 24	NEWS
25 – 30	PARTY

Other than above, "TUNER" is also displayed.

It is recommended that you assign station call buttons to appropriate stations to be preset.

Memory Scan of stations with the same genre name

Memory Scan of all stations classified under the same genre name is possible.

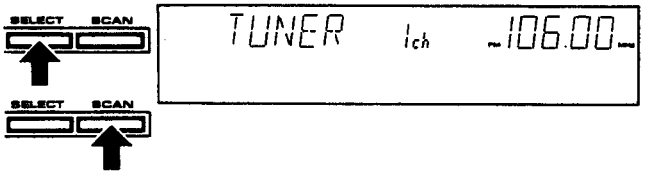
1. **Press the SELECT button to display the NAME you want to Memory Scan.**

2. **Press the SCAN button.**

- Memory Scan of stations classified under the name displayed will be carried out.
- Press the SCAN button again to stop Memory Scan.

Memory Scan of all the station call numbers

Press the SELECT button to display "TUNER," press the SCAN button, and Memory Scan of all the STATION CALL NUMBERS will be carried out.

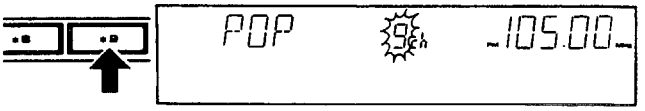


Press the SCAN button again to stop Memory Scan.

Reclassification of a station under a different genre name

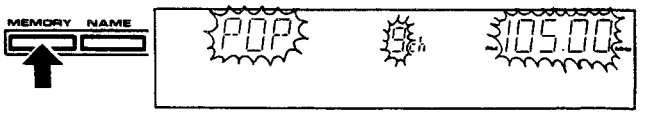
It is possible to change the genre classification of a station.
[Example] When you want to change the classification of the station assigned to STATION CALL NUMBER 9 from "POP" to "JAZZ."

1. **Press the STATION CALL 9 button.**



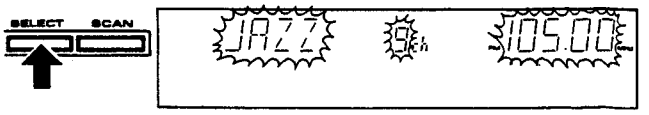
- The station assigned to STATION CALL NUMBER 9 will be recalled.

2. **Press the MEMORY button.**



- The name will flash.

3. **Press the SELECT button to display "JAZZ."**

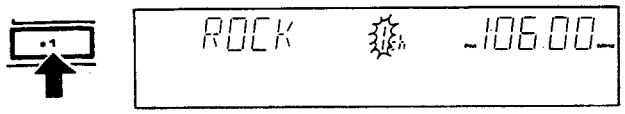


- When the indicator stops flashing, the classification name of STATION CALL NUMBER 9 change to "JAZZ."

Changing the genre name

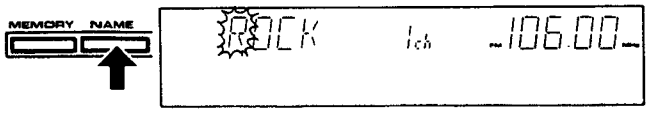
You can change a genre name into a new one. The maximum number of letters in a name is five.
[Example] When you want to change the genre name of STATION CALL NUMBERS 1 to 6 from "ROCK" to "SOUL."

1. **Press the STATION CALL 1 button.**



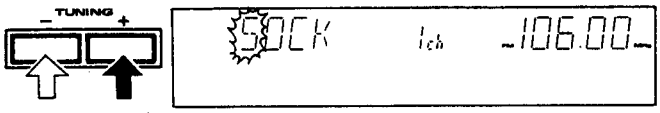
- The station assigned to STATION CALL NUMBER 1 will be recalled.

2. **Press the NAME button.**

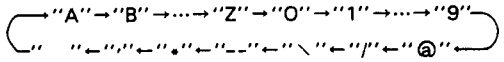


- The "R" in "ROCK" will flash.

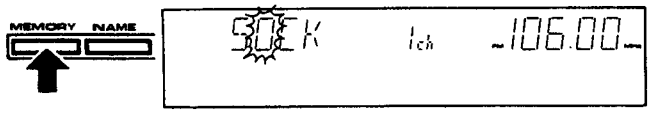
3. **Change the "R" to "S" with the TUNING buttons (–, +).**



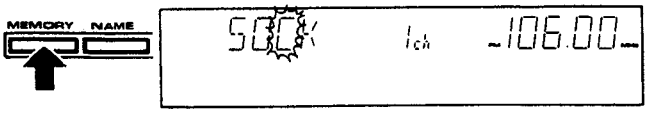
- When the "+" of the TUNING button is pressed, the characters will change in order, in the direction of the arrow. When the "–" is pressed, the characters will change in reverse direction of the arrow.



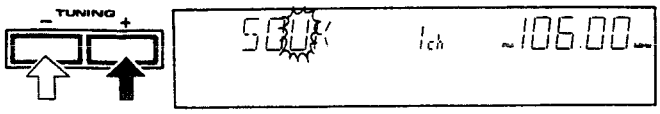
4. **Press the MEMORY button.**

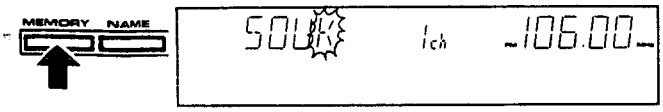


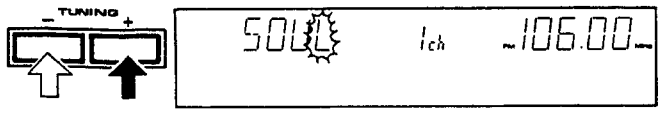
- The "S" will light up, and then the "O" will flash.



5. **Repeat procedures 3 and 4 until "SOUL" is displayed.**







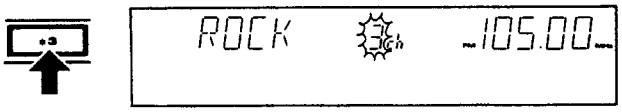
- The name of STATION CALL NUMBERS 1 to 6 becomes "SOUL."

A maximum of five names can be used, but if all the station under a name are reclassified under a different name by the procedure mentioned before, the name will not be displayed even if the SELECT button is pushed.
[Example] If STATION CALL NUMBERS 1 to 12 are all "ROCK," and 13 to 30 are all "JAZZ," each time you press the SELECT button, the display will change in the following order;

ROCK → JAZZ → TUNER → ROCK → ...

Five names are memorized, and even a name not being used at present can be called up again and used as a STATION CALL NO. NAME.
[Example] When changing STATION CALL NO.3, presently classified as "ROCK," to "POP."

1. **Press the STATION CALL 3 button.**



2. **Press the MEMORY button.**

3. **Press the SELECT button to display "POP."**
   - If the SELECT button is pressed after pressing the MEMORY button, a name will be displayed even if no station has been assigned to it.

HINTS FOR BETTER RECEPTION

EXTERNAL FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3-element, 5-element, 7-element) antenna should be used.

GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

NOTE:

Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.

EXTERNAL AM ANTENNA

If it is not possible to obtain adequate AM reception even by changing the orientation of the AM loop antenna, a separate indoor antenna or an outdoor antenna should be installed.

INDOOR AM ANTENNA

Use a vinyl-insulated wire (5 — 6 m) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

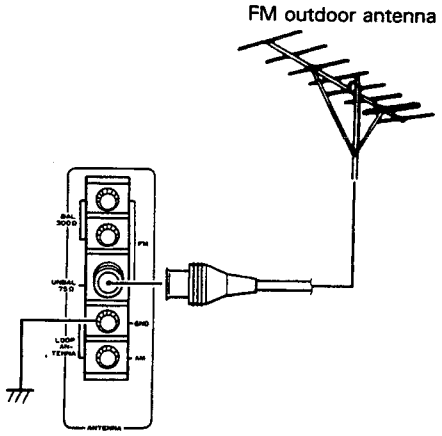
OUTDOOR AM ANTENNA

If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl-insulated wire should be installed outside and fixed in place.

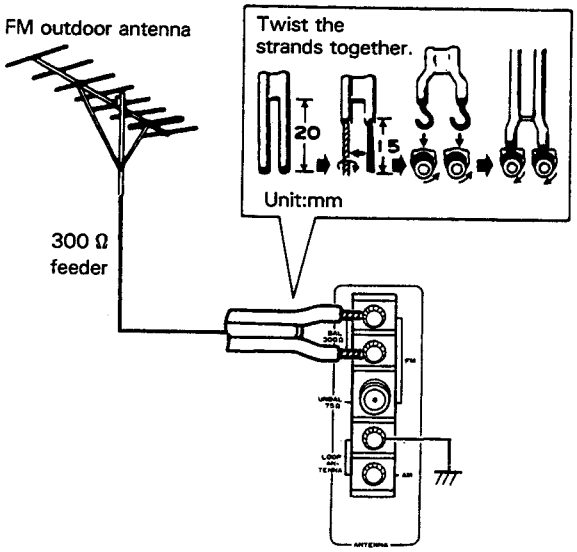
NOTE:

Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna.

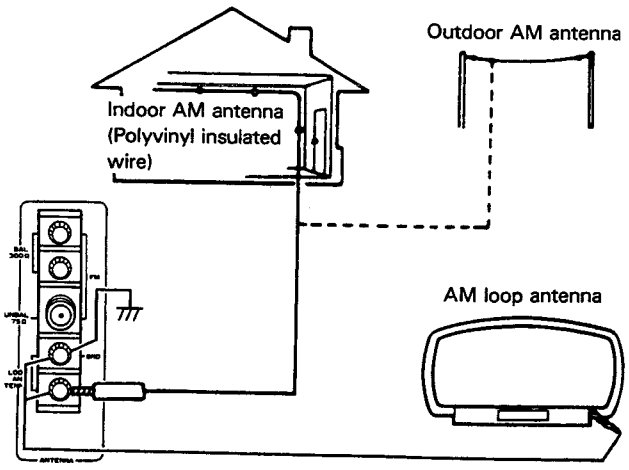
Connecting the coaxial cable



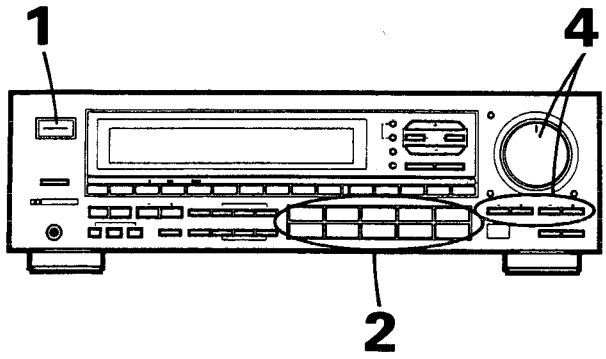
Connecting the 300 Ω feeder



AM antenna connection



SELECTING DIFFERENT PROGRAM SOURCES



1. **Press the POWER switch to the ON position, and turn on the power to the other audio components you wish to use.**
2. **Use the INPUT SELECTOR buttons to select the desired program source.**

Program Source	INPUT SELECTOR button
To listen to records.	PHONO
To listen to compact discs.	CD
To listen to a tape on the cassette deck (or digital audio tape deck) connected to TAPE 1/DAT jacks.	TAPE 1/DAT
To listen to a tape on the cassette deck (or digital audio tape deck) connected to TAPE 2 jacks.	TAPE 2 MONITOR
To listen to a component connected to the LINE jacks.	LINE
To watch a video cassette tape on the VCR connected to VCR 1 jacks.	VCR 1
To watch a video cassette tape on the VCR connected to VCR 2 jacks.	VCR 2
To watch a video disc on a video disc player, or to watch a CDV on a CDV player.	VDP/CDV
To watch a TV program received on a TV tuner connected to the TV jacks.	TV

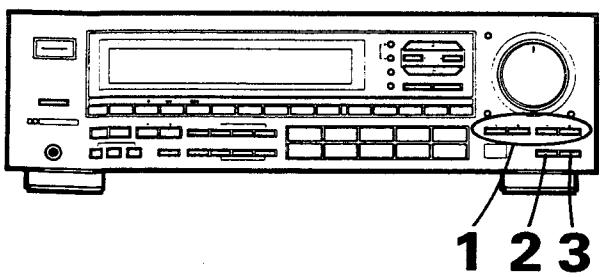
- If you select a music source other than TAPE 2, switch OFF the TAPE 2 MONITOR.

3. **Operate the appropriate audio/video component to play back the program source.**
4. **Adjust the volume and tone controls as desired.**

HOW TO USE THE ACOUSTIC MEMORY

Memorized tone settings can be recalled using the SELECT button. Up to five different tone settings can be memorized.

Setting the Acoustic Memory



1. **Adjust the sound quality as desired using the BASS and TREBLE control buttons.**
   - Setting are shown by the TONE indicator on the display section.
2. **Press the MEMORY button.**
   - The ACOUSTIC indicator on the display section blinks on and off.
3. **Press the SELECT button and select the acoustic memory to which you wish to assign the setting (A — E).**
   * The sound quality setting is memorized approximately two seconds after you last press the SELECT button.

In this way, the desired tone will be preset in one of the five acoustic memory positions. To preset four other desired tone settings, perform the same operations.

Recalling tone setting in the Acoustic Memory

To recall the memorized tone settings, press the SELECT button to select the desired memory position.

→ No indication (FLAT) → LOUDNESS → A → B → C → D → E →

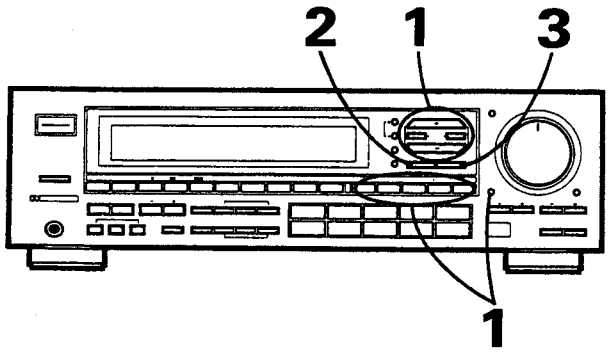
No indication (FLAT): For flat (normal) frequency response.
LOUDNESS: Emphasis the low- and high-frequency ranges. Produces a fuller sense of sound, particularly when listening at low volume.
A — E: Memorized acoustic memory settings.

HOW TO USE THE SOUND FIELD MEMORY

Up to five different settings for SURROUND MODE, DELAY TIME, REAR LEVEL, CENTER MODE, CENTER LEVEL, ACOUSTIC MEMORY, and BALANCE can be memorized. In the unit has an original setting preset in the "P" position.

[Contents of "P"]
SURROUND MODE; DOLBY PRO LOGIC SURROUND
CENTER MODE; PHANTOM
DELAY TIME; 20 ms
REAR LEVEL; CENTER (– 20 dB)
BALANCE; CENTER
CENTER LEVEL; CENTER (– 20 dB)

SETTING THE SOUND FIELD MEMORY



1. **Select SURROUND MODE (and set CENTER MODE and adjust CENTER LEVEL if using DOLBY PRO LOGIC and DOLBY 3CH LOGIC) and adjust DELAY TIME, BALANCE and REAR LEVEL.**
2. **Press the MEMORY button.**
3. **While the indicator is flashing, select the memory position (A — E) with the SELECT button.**
   - When the memory position letter (A — E) stops flashing and lights up, it is memorized. If a memory position (A — E) is not selected while the indicator is flashing, no memory position is memorized.
   - Tone settings not memorized in the ACOUSTIC MEMORY will not be memorized.
   - Settings cannot be memorized in the "P" position.

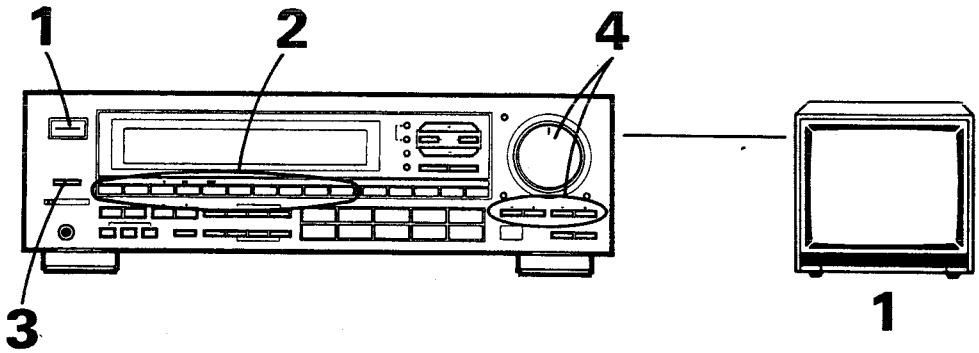
RECALLING MEMORIZED SETTINGS

You can recall the following preset modes with the SELECT button or Sound Field Memory key on the remote control unit.

P ⟶ A ⟶ B ⟶ C ⟶ D ⟶ E

P: The sound field setting previously memorized in the unit.

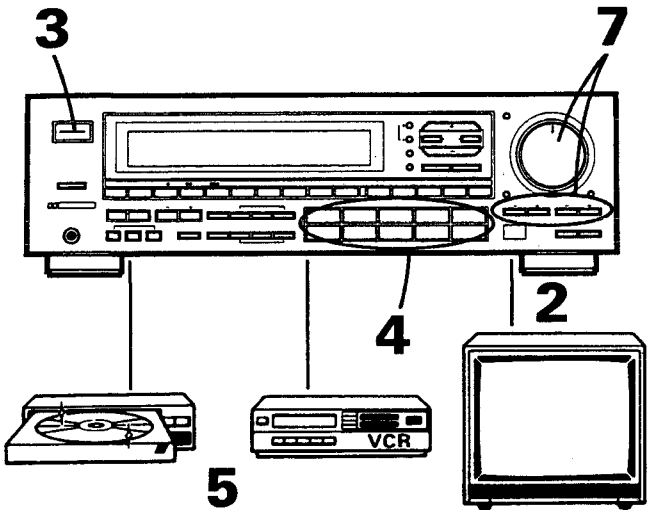
RECEIVING FM SIMULCAST TV PROGRAMS



By combining a TV set and a VCR (or TV tuner), you can receive FM simulcast TV programs (stereo TV sound transmitted from an FM radio station) while viewing the video portion on your TV.

1. **Press the POWER switch to the ON position, and turn on the power to the other components to be used.**
2. **Tune in the desired FM simulcast TV program on the receiver.**
3. **Select the desired TV program with the V-SIGNAL SELECTOR button.**
4. **Adjust the volume and tone controls as desired.**

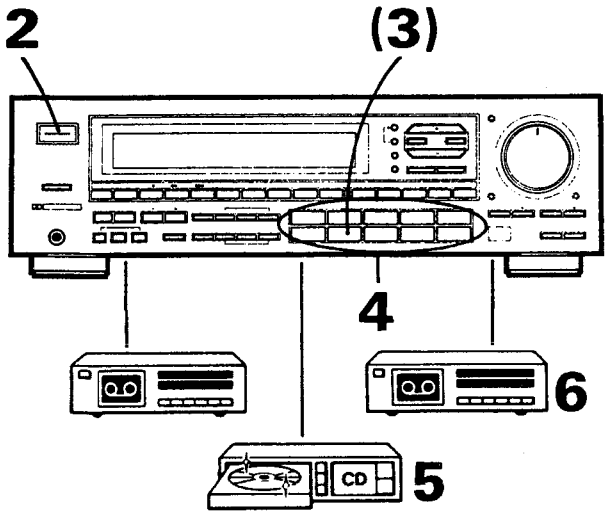
TO WATCH VIDEO PROGRAMS



1. **Connect the video components to the VCR 1, VCR 2, or VDP/CDV jacks.**
2. **Connect the TV set.**
   Connect the receiver's VIDEO OUT TO MONITOR TV 1 (or 2) jack and the TV (or monitor TV) video input jack.
3. **Press the POWER switch to the ON position, and turn on the power to the other components used.**
4. **Set the INPUT SELECTOR button to the appropriate video component to be played back.**
5. **Play back the video component.**
6. **Operate the TV set (or monitor TV) to display the playback picture.**
   When using a TV, switch to the video input mode.
7. **Adjust the volume and tone controls as desired.**

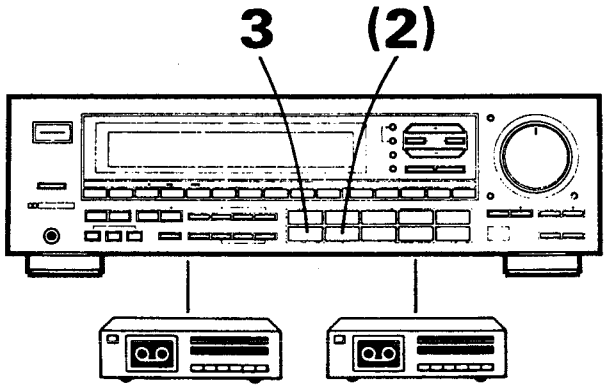
RECORDING WITH A CASSETTE DECK

RECORDING



1. **Connect the audio source component while referring to the sections "AUDIO SYSTEM CONNECTIONS" and "VIDEO SYSTEM CONNECTIONS."**
2. **Press the POWER switch to the ON position.**
3. **If the TAPE 2 MONITOR button is ON, press to turn OFF.**
4. **Use the INPUT SELECTOR button to select the desired program source.**
   - When recording to AM or FM broadcasts, press the desired STATION CALL button if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
5. **Play the desired program source (record, compact disc, etc.).**
6. **Begin recording by following the operating procedures for the applicable cassette deck.**
   - The volume, balance and tone controls have no effect on the recording.

COPYING TAPES



The following operation is TAPE 1/DAT → TAPE 2 copying.
TAPE 2 → TAPE 1/DAT copying is not possible.

1. **Connect the cassette deck to be used for playback to the TAPE 1/DAT jacks, and the cassette deck for recording to the TAPE 2 jacks.**
2. **If the TAPE 2 MONITOR button is ON, press to turn OFF.**
3. **Press the TAPE 1/DAT button.**
   - Set the playback deck to the playback mode and simultaneously set the recording deck to the recording mode.
   - If the recording cassette deck is equipped with a monitoring function, the recording can be monitored by pressing the TAPE 2 MONITOR button to the ON position.

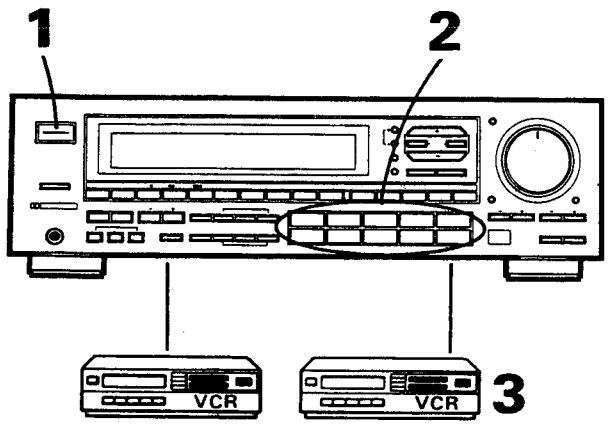
Tape monitoring

When recording is performed on a cassette deck equipped with monitoring function, the recorded sound can be monitored through the speaker system by pressing the TAPE 2 MONITOR button to ON.

Hi-Fi VCR RECORDING

Refer to the connection procedures on pages 8 to 13 and refer to the Hi-Fi VCR's Operating Instructions regarding proper operation procedures. Recording can be performed on both VCR 1 and VCR 2.

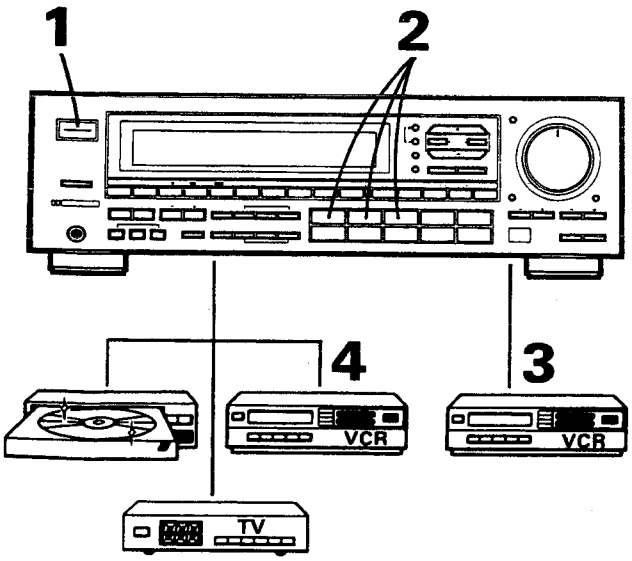
RECORDING SOUND ON A VIDEO TAPE



1. **Press the POWER switch to the ON position, and turn on the power to the Hi-Fi VCR.**
2. **Use the INPUT SELECTOR button to select the desired program source.**
   - When recording to AM or FM broadcasts, press the desired STATION CALL button if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
3. **Insert a video cassette for recording into the Hi-Fi VCR and adjust the recording level.**
   Select the line input for VCR.
4. **Set the VCR to the recording mode and start the program source.**
   - For details, consult the Operating Instructions of the VCR for the recording mode.
   - The volume, balance, and tone controls have no effect on the recording.

NOTE:
Recording cannot be performed on a VCR connected to the VDP/CDV or TV jacks.

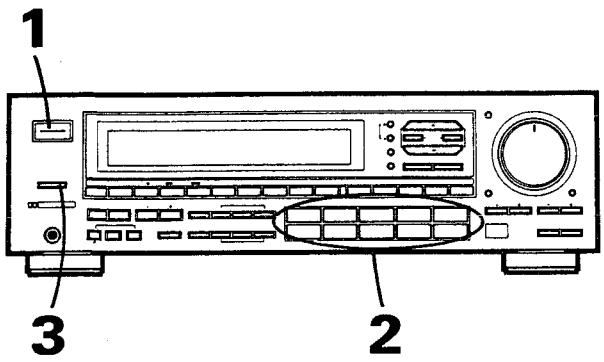
VIDEO TAPE RECORDING



Video tape copying can be performed in either direction between VCR 1 and VCR 2. (VCR 1 ↔ VCR 2)
In addition, identical copies can be made of a program source connected to the VDP/CDV and TV jack. (VDP/CDV → VCR 1, VCR 2 and TV → VCR 1, VCR 2)

1. **Press the POWER switch to the ON position, and turn on the power to the connected VCR (VDP/CDV player, TV tuner).**
2. **Set the INPUT SELECTOR button to the VCR 1, VCR 2, VDP/CDV or TV to be used for playback.**
3. **Set the recording VCR to the recording mode.**
   Select the line input for VCR.
4. **Set the playback VDP/CDV, TV tuner or VCR to the playback mode.**

USING THE VIDEO SIGNAL SELECTOR



This function can be used to allow you to listen to the playback sound while changing the video image only, thus allowing you to playback and record video images different from the playback sound source.

1. **Press the POWER switch to the ON position, and turn on the power to the other components used.**
2. **Set the INPUT SELECTOR button to the audio source.**
   - When listening (or recording) to AM or FM broadcast, press the desired STATION CALL button if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
3. **Set the V-SIGNAL SELECTOR button to the video component (VCR 1, VCR 2, VDP, or TV) used for playback.**
4. **Start playing the desired audio program and video program source.**

[Recording to a VCR]

Carry out the followings after the procedure 3.

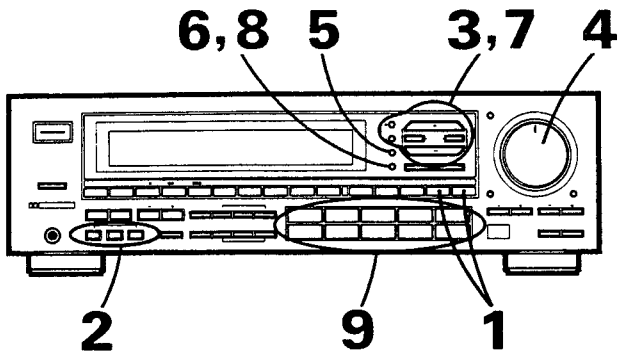
① **Insert a video cassette tape into the VCR to be used for recording.**
② **Set the recording VCR to the recording mode.**
③ **Start playing the desired audio program and video program source.**

CAUTION:

If you must operate the V-SIGNAL SELECTOR button during recording, do so after setting the recording VCR to the pause mode. If the switch is operated when the tape is traveling during recording, the recorded image and sound may be disrupted at the point at which the button is operated.

DOLBY SURROUND LEVEL ADJUSTMENT PROCEDURE

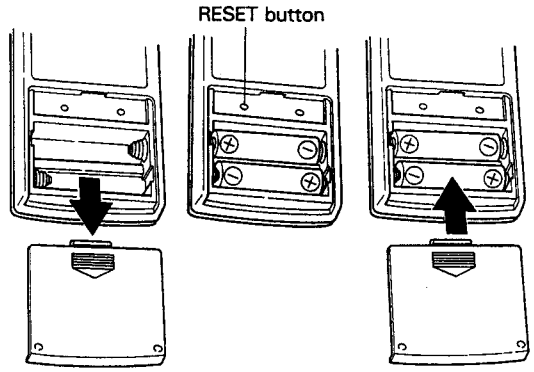
1. **Use the SURROUND MODE button to select DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC.**
2. **Turn on front speakers and center/rear speakers.**
3. **Set balance, center and rear level to preset positions.**
   - Press the MASTER BAL L and R buttons together.
   - Press the REAR LEVEL + and – buttons together.
   - Press the CENTER LEVEL + and – buttons together.
4. **Adjust the MASTER VOLUME to a suitable listening level.**
5. **Select the CENTER MODE setting.**
6. **Turn on the TEST TONE button.**
7. **Use the MASTER BAL L, R buttons, CENTER LEVEL +, – buttons, and the REAR LEVEL +, – buttons to adjust the volume levels of the front left, center, front right, and rear speakers (DOLBY PRO LOGIC) until they are equal when heard from your listening position in the room.**
8. **Turn off the TEST TONE button when finished.**
9. **Use the INPUT SELECTOR to select desired source.**



REMOTE CONTROL OPERATION

LOADING BATTERIES

1. **Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.**
2. **Take out the four supplied batteries (LR6/AM-3), and insert them into the battery compartment in accordance with the indications in the compartment.**
3. **Close the cover of the battery compartment.**



Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

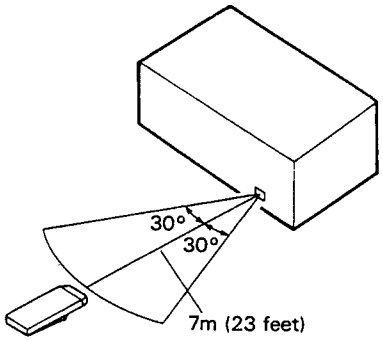
A.
Always insert batteries into the battery compartment correctly matching the positive + and negative − polarities, as indicated inside the compartment.

B.
Never mix new and used batteries.

C.
Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

REMOTE CONTROL RANGE

When operating the remote control unit, point the front of the unit at the front panel of the receiver. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.
Performance of the remote control unit is adversely affected in the presence of strong fluorescent light. Keep such lights away, especially from the sensor window.



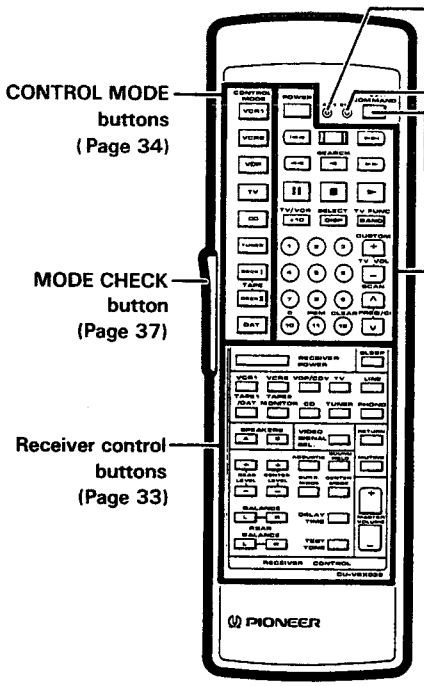
Battery Replacement

When the batteries have run out, the CONTROL MODE buttons will not light properly. If left like this, programs will be erased, so be sure to replace the batteries as soon as possible. As the programmed functions will be retained in memory only as long as batteries are inserted, remove the old batteries only if they can be replaced by new ones immediately. Also, be sure to always use the specified batteries. [size "AA" (LR6/AM-3) alkaline batteries]

NOTE:
When no batteries are inserted, the programmed memory contents will be erased after about 30 minutes.
When you want to clear the programmed memory, refer to page 40.
The memory cannot be cleared simply by removing the batteries.

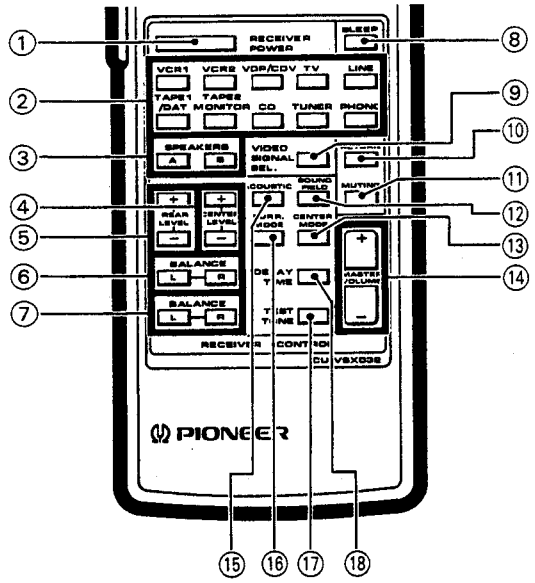
OUTLINE OF BUTTON LAYOUT

- The buttons on the lower half of the remote control command receiver functions.
- Buttons on the upper half are used to operate other components.
- Operation buttons for other components can learn the command signals of other remote control units.
- There are 12 kinds of preset signals for operation of VCR 1, VCR 2, and TV. Select and use one of them.
- A maximum of seven commands can be programmed into the MULTI COMMAND button, enabling transmission of a sequence of commands at the push of a button.


LEARN button (Page 38)
CONTROL MODE buttons (Page 34)
EDIT button (Page 39)
MULTI COMMAND button (Page 39)
MODE CHECK button (Page 37)
Operation buttons (Page 34)
These buttons can be programmed with commands of other remote control units. (Page 38)
Receiver control buttons (Page 33)
PIONEER

The initial functions can operate all products compatible with PIONEER's common system remote control units marked with the symbol SR

RECEIVER CONTROL BUTTONS



① RECEIVER POWER button
Switches the receiver power between ON and STANDBY.

② Input selector buttons
Press when switching the receiver's INPUT SELECTOR.
The CONTROL MODE also switches to the same component (except LINE and PHONO). (One CONTROL MODE button lights.)
Pressing TAPE 1/DAT, TAPE 2 MONITOR, causes the CONTROL MODE DECK II button to light.

③ SPEAKERS A, B buttons
A: ON/OFF button for SPEAKERS A.
B: ON/OFF button for SPEAKERS B.

④ CENTER LEVEL (+, –) buttons
Adjusts the center speaker sound level.

⑤ REAR LEVEL (+, –) buttons
Adjusts the sound level of the rear speakers to the level of the front speakers.

⑥ BALANCE (L, R) buttons
Adjust left and right balance of front and rear speakers.

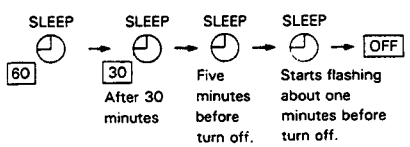
⑦ REAR BALANCE (L, R) buttons
Adjust rear speakers left and right balance.

⑧ SLEEP timer button
Activates the SLEEP timer. During SLEEP timer operation, the "dimmer" function decreases the brightness of the display section. The duration changes in the following manner each time the button is pressed:

60 → 30 → OFF →

Unit: minutes

Display appearance if 60 minutes is selected.



⑨ VIDEO SIGNAL SEL (SELECTOR) button
This switches just the video signal in sequence, leaving the sound unchanged.

VCR 1 → VCR 2 → VDP → TV → OFF →

⑩ RETURN button
Press the RETURN button to return the receiver into the initial state. TUNER is selected at this initial state. Adjust the sound level by using the MASTER VOLUME buttons.

NOTE:
If no sound is output after the RETURN button is pressed, make sure that SPEAKERS buttons are turned on.

⑪ MUTING button
Used to temporarily mute the sound.
The volume is restored when pressed again.

⑫ SOUND FIELD select button
The sound field setting changes in the following manner each time this button is pressed.

P → A → B → C → D → E →

⑬ CENTER MODE button
When DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC are ON, use to switch the center mode (NORMAL, PHANTOM, WIDE) (Refer to page 19).

⑭ MASTER VOLUME (+, –) buttons
Adjusts the overall volume.

⑮ ACOUSTIC select button
The acoustic setting changes in the following manner each time this button is pressed.

FLAT → LOUDNESS →
E ← D ← C ← B ← A

⑯ SURR (SURROUND) MODE button
The surround mode is switched in the following manner each time the button is pressed:

STADIUM → OFF → DOLBY PRO LOGIC SURROUND →
SIMULATED SURROUND ← DOLBY 3CH LOGIC ←

⑰ TEST TONE button
Use to adjust the test tone volume level from each speaker.
Operates when the DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC mode is selected.
When the test tone is switched ON, "TEST" is displayed in the display section, and the test tone is output through each speaker in turn for about two seconds. Adjust volume level so that it is the same from each speaker.

⑱ DELAY TIME button
Switches the delay time for surround each time it is pressed.
- **DOLBY PRO LOGIC SURROUND:**

15 → 20 → 25 → 30 →

Unit: ms

- **STADIUM/SIMULATED SURROUND:**

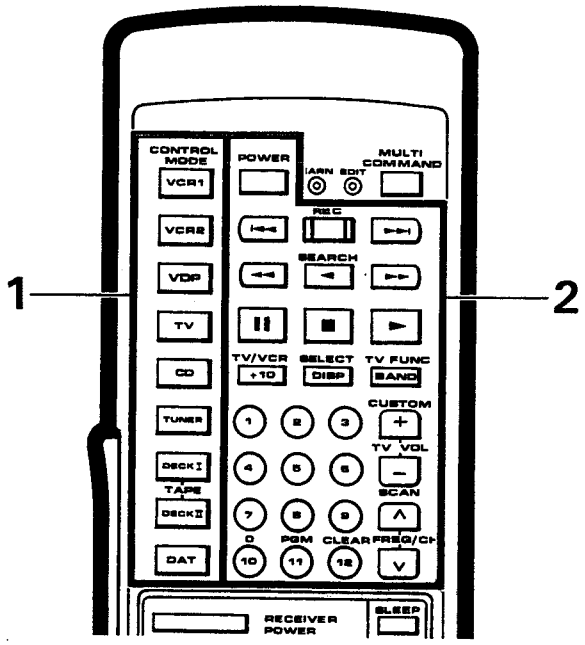
5 → 10 → 15 → 20 → 25 → 30 → 35 →

Unit: ms

OPERATING OTHER COMPONENTS

REMOTE CONTROLLING OF ANY OTHER OF YOUR AUDIO-VISUAL COMPONENTS VIA THIS UNIT REQUIRES:

1. All components must be remote controllable (have a sensor window on the front panel) to receive direct command from this unit, upon successful learning of those commands by this programmable unit or,
2. All units must have remote control jacks (IN/OUT) on the rear panel and be correctly connected to the receiver according to the diagram on page 5.

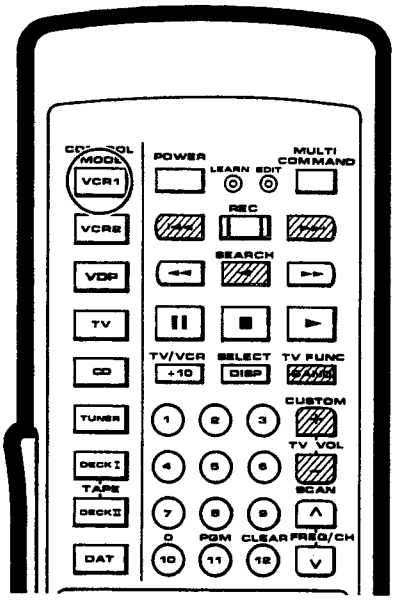


When operating components other than the receiver:

1. **Press the CONTROL MODE buttons for the component you want to operate.**
2. **Press the operation button.**

▨ buttons do not operate in the selected CONTROL MODE.

VCR 1 operation



(With VCR 2, even if you press an operation button, no signal is output. Preset or program and use.)

POWER button:
Switches VCR power ON/OFF.

REC button:
Selects the recording mode.

◄◄ **(REW) button:**
Rewinds the tape and allows picture search.

►► **(FF) button:**
Rapidly advances the tape and allows picture search.

II **(PAUSE/STILL) button:**
Sets pause and still picture.

■ **(STOP) button:**
Stops tape transport.

► **(PLAY) button:**
Selects playback.

TV/VCR button:
This button can be used only for VCRs with a TV/VCR selector.
Toggles the antenna output between TV and VCR.

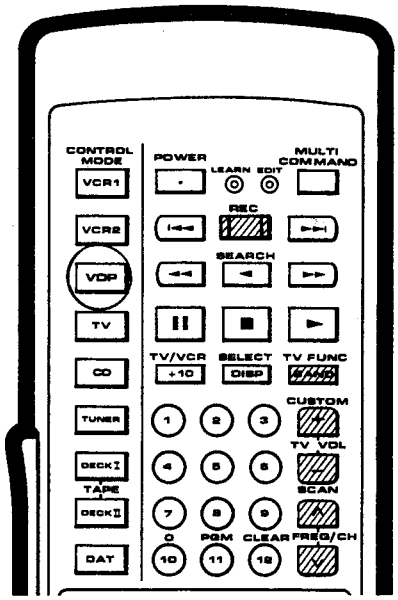
DISP (DISPLAY) button:
Switches TV screen display ON/OFF.

1—12 buttons:
Use to call up channels.

CH ∧ button:
Shifts channels in ascending order.

CH ∨ button:
Shifts channels in descending order.

Video disc player (LD player) operation



POWER button:
Switches VDP (LD player) power ON/OFF.

|◄◄ (CHAPTER SKIP) button
Searches for the start of the chapter playing.

►►| (CHAPTER SKIP) button
Searches for the start of the next chapter.

SEARCH button:
Used for the search operation and for the memory repeat operation.

◄◄ (SCAN) button:
Selects fast backward.

►► (SCAN) button:
Selects fast forward.

II (PAUSE) button:
Video and audio are stopped and playback is paused.

■ (STOP/EJECT) button:
Playback is stopped when pressed once. Pressing again causes the disc table to come out.

► (PLAY) button:
Selects playback.

+10 button:
Use to input such information as chapter numbers higher than 10.

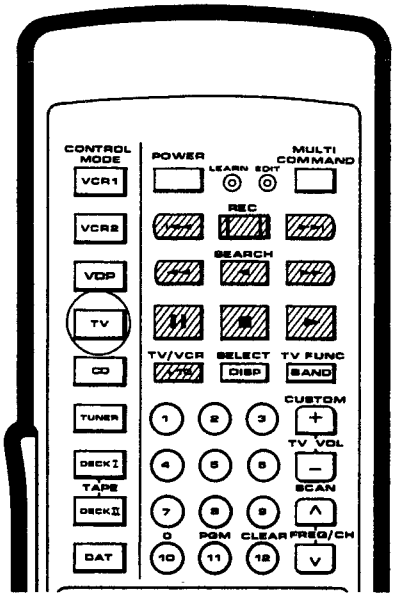
DISP (DISPLAY) button:
Switches TV screen display of chapter, frame/time number ON/OFF.

1—10 buttons:
Used for chapter and frame/time number search and for chapter program play.

PGM (PROGRAM) button:
Allows use of chapter program play.

CLEAR button:
Used for releasing repeat playback, number correction and mode release during search operation, and for releasing chapter program play.

TV operation



POWER button:
Switches the power of the TV ON/OFF.

DISP (DISPLAY) button:
TV super impose display ON/OFF.

TV FUNC (TV FUNCTION) button:
Used to change the TV FUNCTION.
• The TV FUNC button cannot be used with some Pioneer TVs.

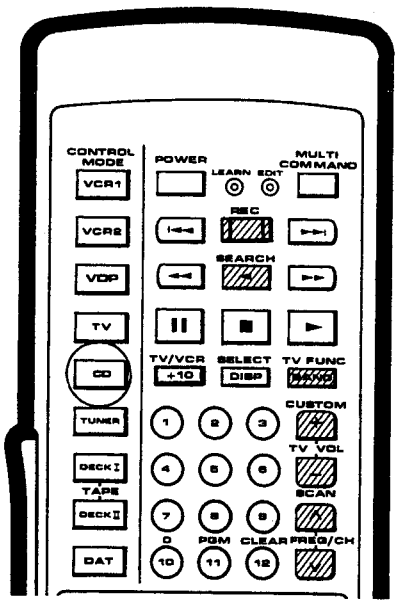
1—12 buttons:
Used to call up channels.

TV VOL (+, –) buttons:
Raises and lowers the volume.

CH (∧, ∨) buttons:
Changes the channel in the direction of larger (∧) and smaller (∨) channel numbers.

REMOTE CONTROL OPERATION

CD player operation



POWER button:
Switches CD player power ON/OFF.

⏮ **(TRACK SEARCH) button:**
Returns to the beginning of the track currently in playing.

⏭ **(TRACK SEARCH) button:**
Advances to the next track.

◄◄ **(MANUAL SEARCH) button:**
Selects fast backward.

►► **(MANUAL SEARCH) button:**
Selects fast forward.

⏸ **(PAUSE) button:**
Pauses playback.

■ **(STOP) button:**
Stops playback.

► **(PLAY) button:**
Selects playback.

+10 button:
Use when selecting a track number higher than 10. For example, to select 21, press the +10 button twice and then the 1 button. This button cannot be used with some CD players.

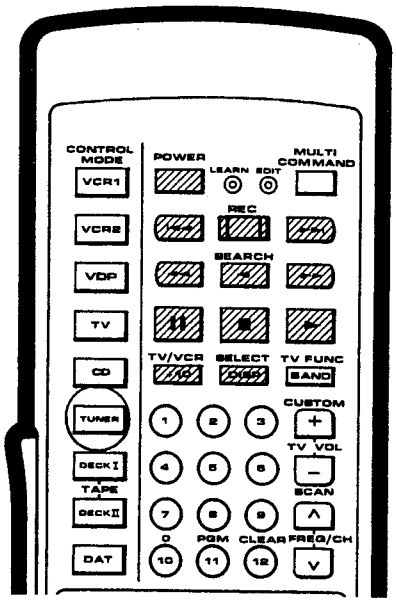
SELECT button:
Selects the DISC No. (1 to 6) for Multi-play CD players.

1—10 buttons:
For direct selection of a track or programming of tracks.

PGM (PROGRAM) button:
Press to program the CD player.

CLEAR button:
Erases a memorized program.

Tuner operation (The receiver tuner section can also be operated in this position)



1—12 buttons:
For recall of tuner presets.
Buttons 1 to 10 are used for the receiver (Buttons 11 and 12 cannot be used).

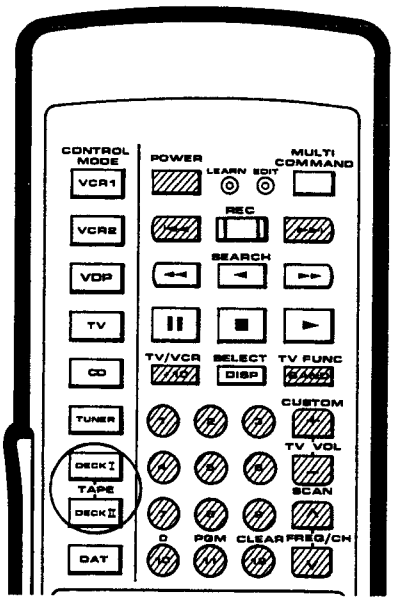
BAND button:
Switches the FM and AM bands in turn.

SCAN button:
Press when you want to operate memory scan.
If you press this button after pressing the CUSTOM button to display custom memory genre names, such as ROCK and JAZZ, the STATION CALL NO.s of the selected genre name will be scanned.

CUSTOM button:
Press when you want to recall a custom memory genre name.

FREQ (∧, ∨) buttons:
Shifts the frequency up (∧) and down (∨).

DECK I, II operation



When using a single cassette deck, select DECK II.

REC (REC) button:
Selects the recording or recording standby mode.

◄◄, ►► (FF) buttons:
Rapidly advances the tape in the direction of the arrow.

◄ (PLAY) button:
Selects reverse playback.

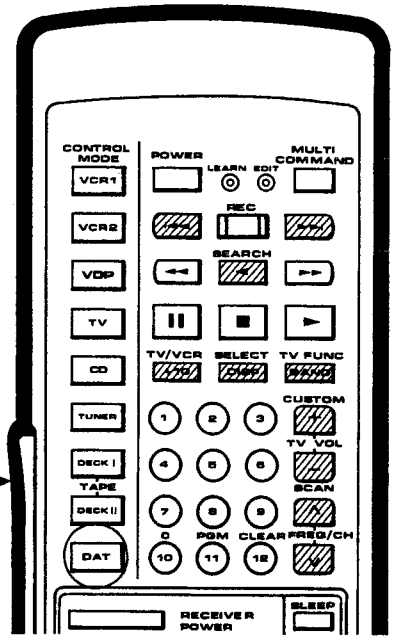
II (PAUSE) button:
Temporarily stops tape transport. Press again to resume tape transport.

■ (STOP) button:
Stops the tape transport.

► (PLAY) button:
Selects forward playback.

SELECT button:
Selects the cassette No. (1 to 6) for multi-cassette changer.

DAT operation



POWER button:
Switches DAT deck power ON/OFF.

REC (REC) button:
Selects the recording mode.

◄◄ (REW) button:
Rewind.

►► (FF) button:
Fast forward.

II (PAUSE) button:
Temporarily stops tape transport.
Press again to resume tape transport.

■ (STOP) buton:
Stops the tape transports.

► (PLAY) button:
Playback.

1—10 buttons:
Use to input numbers.

PGM (PROGRAM) button:
Use to playback a program.

MODE CHECK button

When you press the MODE CHECK button, the button for the present CONTROL MODE (for example, LD) lights. If you continue pressing the button, the CONTROL MODE changes in sequence.

PROGRAMMING

The LEARN mode and the EDIT mode are available for programming. In the EDIT MODE, there is a PRESET mode and a MULTI-EDIT mode.

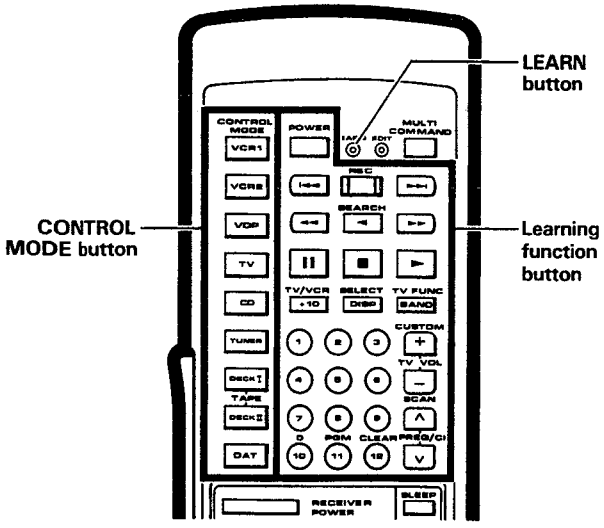
- **LEARN MODE:** In each of the CONTROL MODE, a single remote control signal can be input into each of the operation buttons.
- **EDIT MODE**
  PRESET MODE: In the VCR 1, VCR 2, or TV CONTROL MODE, you can select and use one of the 12 kinds of preset remote control signals.
  MULTI-EDIT MODE: Input up to seven commands into the MULTI-COMMAND button, and transmit the sequence of commands at the push of a single button.

LEARN

This system's remote control can "learn" the commands of other remote control units, regardless of manufacturer, as long as the other unit is of the infrared type.
On rare occasions, programming this unit may be impossible with some special types of infrared remote control units.
In some cases you may still need the original remote control unit for special situations. But as a rule, you will be able to use this Pioneer remote control for most system control needs, including video as well as audio equipment.

Learning capacity and buttons that can learn

The buttons shown in the diagram can learn. By changing the CONTROL MODE, a single button can be used to learn a maximum of nine commands, enabling a total of 261 commands to be learned. However, the capacity for learning differs depending on the remote control signal. With Pioneer remote control signals, about 70 commands can be learned.



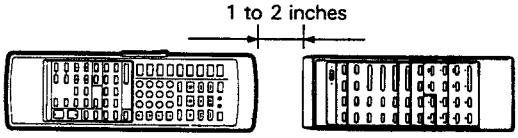
[Learning procedure]

1. **Press the LEARN button to switch to the LEARN mode.**
2. **Press one of the CONTROL MODE buttons.**
3. **Press one of the learning function buttons.**
4. **Receive a remote control signal from another remote control and learn.**

[Operation example]

As a learning example, an explanation follows on how to use the CONTROL MODE VCR 1 [►] button to learn the VCR PLAY signal

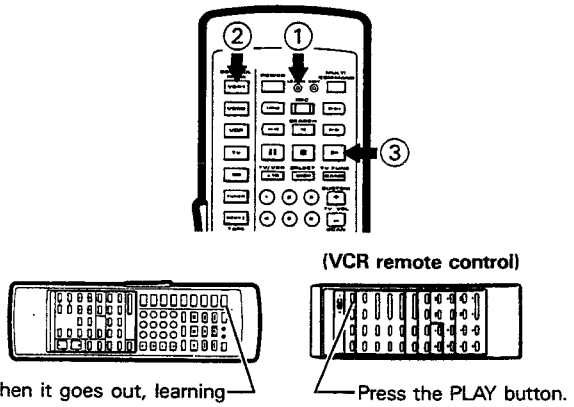
Place the transmission sections of the programmable remote control unit and the remote control of the VCR facing each other.
NOTE:
Be sure to place the remotes on a stable surface such as a table while doing this. Also, avoid placing near fluorescent lighting fixtures or in direct sunlight. When programing operations, use new batteries.



Place the two units on a table, separated by 2 to 5 cm (1 to 2 inches). Memorization will not be possible if they are too close.

1. **Press the LEARN button.**
   - All the CONTROL MODE buttons flash at random.
2. **Press the VCR 1 CONTROL MODE button.**
   - Only the VCR 1 button flashes.
3. **Press the [►] button.**
   - The VCR 1 button goes out, and lights after about one second. If you perform procedure 4 before the VCR 1 button lights, correct learning is not possible, so be sure to confirm that the button is lit.
4. **Continue pressing the PLAY button on the VCR remote control.**
   - When learning is completed, the VCR 1 button goes out, and all the CONTROL MODE buttons flash at random. The VCR 1 [►] button has learned the new signal.
     During the learning operation, if you press the VCR [►] button twice, or move the remote control, correct learning is not possible.

To continue learning with other buttons, continue from procedure 2.


(VCR remote control)
When it goes out, learning has been completed.
And returns to the learning procedure step 1.
Press the PLAY button.

To end the learning operation, press the LEARN button.

[When learning is not possible]

After the selected CONTROL MODE button (for example VCR 1) flashes twice, and all the CONTROL MODE buttons flash, repeat the learning operation from procedure 2.

[When learning is not possible because memory is full]

After the selected CONTROL MODE button (for example VCR 1) flashes four times, the LEARN MODE is canceled.

[If the memory becomes full even when you have used only a small number of buttons for learning, take the following steps.]

• **Try learning once more using the button that resulted in full memory.**
Memory may appear to be full even when it isn't due to the two remote controls being too far apart, not enough power remaining in the batteries, or the effect of light from fluorescent lighting fixtures or direct sunlight.

• **Check buttons already used for learning.**
If the CONTROL MODE button remains lit after you have quickly pressed and released a button used for learning, memorization in that button is incorrect, resulting in the memory full condition. If you perform learning once more, abnormal data is cleared, returning you to normal conditions.

NOTE:
- *After pressing the LEARN button, if you do not press a button within about 30 seconds, the LEARN MODE is canceled.*
- *After pressing one CONTROL MODE button, if you do not press a button that can learn within about 30 seconds, the LEARN MODE is canceled. If a button other than a one that can learn is pressed, the condition for CONTROL MODE button input is resumed.*
- *After pressing an operation button that can learn, if a remote control signal is not received within 45 seconds, the LEARN MODE is canceled.*

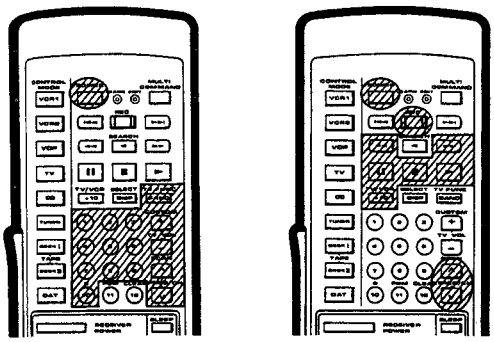
EDIT

In the EDIT MODE, there is the PRESET MODE and MULTI-EDIT MODE.

PRESET MODE (TV, VCR 1, VCR 2)

12 kinds of remote control signal formats are already preset for basic TV and VCR functions. If they conform to your TV or VCR functions, you can automatically preset operation buttons with the desired format's remote control signals and use to commands operations. It is not necessary to learn commands one at a time.
Preset operation buttons are indicated in the diagram by ▨.
When you also want to use other buttons, use the LEARN operation to memorize commands.

(TV) (VCR)



Button functions are the same as Pioneer's unified remote control code functions, so refer to page 35 concerning TV functions, and page 34 concerning VCR functions.

NOTE:
- *If there is a remote control operation button for a function your TV or VCR does not have, operation is not possible.*
- *Depending on the kind of remote control signal, it may not be possible to preset TV FUNC buttons for TV operation.*
- *The Pioneer remote control code remains without presetting for TV DISP, 11 and 12 buttons and VCR DISP, 1 to 12 buttons.*

[Procedure for presetting]

1. **Press the EDIT button to switch to the EDIT mode.**
2. **Press one of the CONTROL MODE buttons (VCR 1, VCR 2 , or TV).**
3. **Press one of the 1 to 12 buttons.**
   - One kind of code is preset.
   - To continue presetting, repeat operation porcedure 2, 3.
4. **Press the EDIT button.**
   - The EDIT mode is canceled.
5. **Confirm that the component (TV or VCR) can be operated by the preset code.**
   If operation is not possible, repeat the procedure from step 2, and press a different number button (1—12) at step 3 to search for a preset code that enables operation. Refer to the diagram on page 40.

[Operation example]

As a preset example, here is an explanation of how to preset in VCR 1.

1. **Press the EDIT button.**
   - The VCR 1, VCR 2, and TV CONTROL MODE buttons flash in sequence.
2. **Press the VCR 1 CONTROL MODE button.**
   - Only the VCR 1 button flashes.
3. **Press one of the buttons 1 to 12.**
   - For example, if you press button 1, the remote control signal format selected with button 1 is preset in the VCR 1 operation buttons.
     The CONTROL MODE buttons light in sequence (indicating that registration has been completed), and then the VCR 1, VCR 2, and TV buttons flash in sequence. (Returning to the condition in procedure 1).
   - To continue presetting for VCR 2 and TV, repeat operation procedures 2 and 3.
4. **Press the EDIT button.**
   - The EDIT mode is canceled.
5. **Point the remote control at the sensor window of the VCR you want to operate, and press a preset button to confirm that VCR operation is possible.**
   - If operation is possible, presetting has been completed.
   - If operation is not possible, repeat operations from step 2, selecting a different number button (1 to 12) at step 3.

If there is a button among buttons 1 to 12 that cannot operate, press the EDIT button once more to cancel the EDIT mode, and memorize in the LEARN mode.

NOTE:
- *After pressing the EDIT button, if you do not press a button within about one minute, the EDIT mode is canceled.*
- *After presetting, you can use the LEARN mode to memorize a command in a preset button, but the preset signal is erased.*
- *After memorizing in the LEARN mode, if you preset operations under specified buttons, signals memorized in the LEARN mode are cleared.*

MULTI-EDIT MODE

A maximum of seven commands can be programmed into MULTI COMMAND button. This enables a series of signals to be transmitted simply by pushing the MULTI COMMAND button.

(Example)
Programming the following three commands into the MULTI COMMAND button.
① RECEIVER POWER
② RECEIVER FUNCTION CD
③ CD PLAY (►)

1. **Press the EDIT button. (Switches to the EDIT mode)**
   - The VCR 1, VCR 2, and TV CONTROL MODE buttons flash in sequence.
2. **Press the MULTI COMMAND button. (Switches to the MULTI-EDIT mode)**
   - The CONTROL MODE buttons flash at random.
3. **Press the RECEIVER POWER button.**
   - The CONTROL MODE buttons go out, and then flash at random. (Registration is completed.)
4. **Press the CD receiver input selector button.**
   - The CONTROL MODE buttons go out, and then flash at random. (Registration is completed)
5. **Press the CD CONTROL MODE button.**
   - The CD button flashes.
6. **Press the PLAY (►) button.**
   - The CD button goes out, and then the CONTROL MODE buttons flash. (Registration is completed)
7. **Press the MULTI COMMAND button.**
   - The CONTROL MODE buttons light in sequence (this means that registration has been completed), and then the VCR 1, VCR 2, and TV buttons flash in sequence.
8. **Press the EDIT button.**
   - The EDIT mode is canceled.

If you press the MULTI COMMAND button, these remote control signals are transmitted in the order programmed, so if CONTROL IN/OUT is connected (refer to page 17), and if remote control signals can reach both the receiver and CD player sensor windows, power to the receiver switches on, the input selector switches to CD, and the CD player starts playing. (When the CD player's power cord is plugged into the receiver's switched AC OUTLET.)

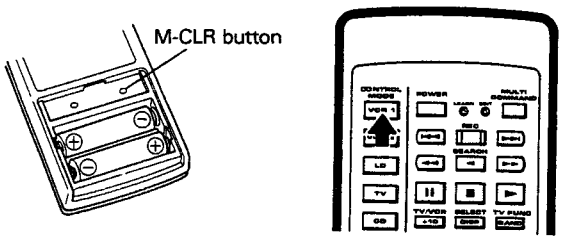
NOTE:

- *After pressing the seventh command, the MULTI-EDIT mode is registered automatically (The VCR 1, VCR 2, and TV CONTROL MODE buttons flash in sequence), but the EDIT mode is not canceled. To cancel the EDIT mode, press the EDIT button.*
- *After memorizing six or less commands, if you cancel the EDIT mode without pressing the MULTI COMMAND button again, all the registered commands are cleared, leaving the previous commands as they were.*
- *If a button is for transmission, even if it is not an operation button in the selected CONTROL MODE, registration is still possible (Buttons such as the VCR 1 |◄◄).*
- *If the component to be operated is installed at a distance, if there is an obstacle between a specific component sensor window and the remote control, or if component operation speeds are very different, MULTI-COMMAND operation may be incorrect. When repeating operations, first return to the initial settings for each component. For operations such as power ON/OFF, if components are switched ON, they can be switched OFF by transmitting a signal.*

RETURNING TO THE INITIAL SETTINGS

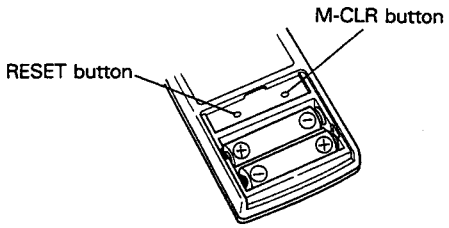
Initialization of particular CONTROL MODES

1. **Remove the battery compartment cover.**
2. **While pressing the M-CLR button inside the cover, press the button for the CONTROL MODE (for example VCR 1) you want to initialize.**
   - For example, if you initialize VCR 1 using the method mentioned above, the CONTROL MODE button lights for about one second, and the VCR 1 operation buttons are initialized.



Initializing the entire memory

1. **Remove the battery compartment cover.**
2. **While pressing the M-CLR button inside the cover, press the RESET button.**
   - Do not release the M-CLR button before releasing the RESET button. While pressing the M-CLR button, press the RESET button, and quickly release.
     Initialization is not possible if the buttons are pressed in the reverse order.
   - All the CONTROL MODE operation buttons are initialized, and data in the MULTI-COMMAND button is cleared.



REMOTE CONTROL CODES OF OTHER MANUFACTURERS PRESET IN THE PRESET

The following table shows the PRESET MODE buttons (1 to 12) used to call up the remote control codes of other manufacturers. Preset remote control signals in the table, however, may not always enable operation. If operation is not possible, switch to the LEARN mode, and learn signals from the VCR or TV remote control. Numbers in parenthesis indicate a reduced possibility of operation.

Manufacturer	TV	VCR
RCA	1, (10)	(1), (6)
ZENITH	3	(3), (4)
GE	8, (11), (1)	(1), (8)
SONY	4	4
TOSHIBA	5	5, (9)
HITACHI	6, (10)	6
PHILIPS	7	—
JVC	—	7
PANASONIC	8	8
MITSUBISHI	9, (10)	9
SANYO	—	10, (12)
SHARP	(2)	2
GOLD STAR	(10)	(11)
MAGNAVOX	(7), (10), (12)	(8), (9)
SYLVANIA	(7), (10), (12)	(8), (9)
QUASER	8	8
FISHER	—	12, (10)
WARD'S	(2), (7), (10), (11)	(2)

TROUBLESHOOTING

Incorrect operation is often mistaken for equipment malfunction. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
Power does not come on even when POWER switch is pressed.	• Power cord is disconnected. • Instances are rare, but the problem may be due to the operation of the protector circuit.	• Connect cord securely. • Unplug the power cord of the unit from the AC wall outlet, then plug it in again.
Control was not possible regardless of what operation button was pressed.	• Static electricity affected the unit when the air was dry, such as in winter.	• Unplug the power cord of the unit from the AC wall outlet, then plug it in again. • If static electricity is pronounced, it is recommended that you operate the unit using the remote control unit.
No sound is produced, even when the INPUT SELECTOR button is selected.	• Connections are incorrect. • The MUTING button is pressed. • VOLUME is turned down. • Speaker connecting wires are disconnected from speaker terminals. • One or both of the input cords are disconnected. • TAPE 2 MONITOR button is in the ON position. • Connector bars are disconnected. • The SPEAKERS button is OFF.	• Consult page 8 — 14 and perform connections correctly. • Press the MUTING button to cancel the MUTING effect. • Raise volume. • Connect wires to terminals securely. • Connect input cords securely. • Press the button again to the OFF position. • Connect bars securely. • Switch the SPEAKERS button ON.
No picture is produced, even when the INPUT SELECTOR switch is selected.	• Connections are incorrect. • The V-SIGNAL SELECTOR is not set properly. • The selected INPUT SELECTOR button is not correct.	• Consult page 8 — 14 and perform connections correctly. • Set correctly. • Press the correct button.
High noise level.	• Station has not been tuned in to correct frequency. • Antenna has not been connected or has become disconnected. **FM reception** • Accessory T-type antenna remains bundled up or it is not pointing in right direction. • Weak broadcasting station signals. **AM reception** • AM loop antenna is not pointing in right direction. • Weak broadcasting station signals. • Noise being picked up from this unit and other equipment (especially electrical appliances using motor or fluorescent lights).	• Tune the station in correctly. • Connect the antenna securely. • Stretch both ends of antenna taut and locate direction yielding optimum reception. • Replace accessory T-type antenna with outdoor FM antenna. • Change the direction of AM loop antenna and find a position where reception is improved. • Erect outdoor AM antenna or connect ground wire. • Stop using appliances generating noise or remove them from vicinity of stereo equipment. • Separate the loop antenna from the unit by some distance.
No auto stop.	• Input signals are not strong enough.	• (FM) If the T-type antenna is being used, change to an outdoor antenna.
TV source can't be seen when the VCR's TV tuner is used.	• TV antenna is not connected to VCR, or connections are faulty. • You are attempting to watch a TV source using a VCR with copy system connections. In general, when copy system connections are made, the VCR's TV tuner function ceases to operate. For details, consult the operating instructions for your VCR.	• Consult the VCR's operating instructions, and connect antenna correctly. • Disconnect the copy system connection (TV tuner function will operate).
Video tape copies can't be made with the VCR.	• Video tape copy connections haven't been made.	• Look again closely at the section VIDEO SYSTEM CONNECTIONS on page 9, 11, and connect correctly.

TROUBLESHOOTING

Symptom	Cause	Remedy
No rear sound is produced.	• The SURROUND MODE button is set incorrect. • The REAR LEVEL button is turned down. • The REAR SPEAKERS button is OFF. • Speaker connecting wires are disconnected from REAR SPEAKERS terminal.	• Set correctly. • Raise rear level. • Switch ON. • Connect wires to terminals securely.
Rear L or R sound is not produced.	• REAR BALANCE is incorrect. • The sound is monaural.	• Press the REAR BALANCE L or R button on the remote control unit to correct the balance. • Use the SIMULATED SURROUND mode.
Remote control does not work.	• Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window. • CONTROL MODE is not set for the component you want to operate. • You are pressing a button that does not transmit a signal. • A fluorescent light is shining on the remote sensor window.	• Insert new batteries. • Use within seven meters and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle. • Select the correct CONTROL MODE button and press. • Refer once more to page 32 and after, and press a button that transmits a signal. • Move so fluorescent light does not shine directly on amplifier front panel remote sensor window.

Abnormal functioning of this unit may be caused by lightning, static electricity, or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.

SPECIFICATIONS

Amplifier section

[POWER AMP IN]

Continuous average power output of 105 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.008 % total harmonic distortion (front).**

Continuous power output
- Rear ..... 25 W + 25 W (1 kHz, 0.08 %, 8 Ω)
- Center ..... 25 W (1 kHz, 0.08 %, 8 Ω)

Dynamic Power (2 Ω/4 Ω) ..... 230 W/200 W

Input (Sensitivity/Impedance)
- PHONO MM ..... 2.5 mV/47 kΩ
- CD, TAPE 1/DAT, TAPE 2, LINE, VDP/CDV, TV, VCR 1, VCR 2 ..... 150 mV/47 kΩ
- FRONT POWER AMP IN ..... 1 V/47 kΩ

Phono Overload Level (T.H.D. 0.08 %, 1000 Hz)
- PHONO MM ..... 130 mV

Frequency Response
- PHONO MM ..... 20 Hz to 20,000 Hz ±0.3 dB
- CD, TAPE 1/DAT, TAPE 2, LINE, VDP/CDV, TV, VCR 1, VCR 2 ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)
- TAPE 1/DAT REC, TAPE 2 REC ..... 150 mV/2.2 kΩ
- VCR 1 OUT, VCR 2 OUT ..... 150 mV/2.2 kΩ
- PRE AMP OUT ..... 1 V/470 Ω

Tone Control
- BASS 100 Hz ..... ±8 dB
- TREBLE 10 kHz ..... ±8 dB

Loudness Contour ..... +6 dB (100 Hz), +3 dB (10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
- PHONO MM ..... 82 dB
- CD, TAPE 1/DAT, TAPE 2, LINE, VDP/CDV, TV, VCR 1, VCR 2 ..... 98 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
- PHONO MM ..... 77 dB
- CD, TAPE 1/DAT, TAPE 2, LINE, VDP/CDV, TV, VCR 1, VCR 2 ..... 80 dB

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*

** *Measured by Audio Spectrum Analyzer.*

VIDEO Section

Input (Sensitivity/Impedance)
VCR 1, VCR 2, VDP/CDV, TV ..... 1 Vp-p/75 Ω

Output (Level/Impedance)
VCR 1, VCR 2, MONITOR ..... 1 Vp-p/75 Ω

Frequency Response
VCR 1, VCR 2, VDP/CDV, TV → MONITOR ... 5 Hz — 10 MHz $^{+0}_{-3}$ dB

Signal to noise ratio ..... 55 dB

Cross Talk ..... 55 dB

SURROUND Section

REAR PRE AMP OUT (Level/Impedance) ..... 1 V/470 Ω
- POWER AMP IN (Sensitivity/Impedance) ..... 1 V/47 kΩ

CENTER PRE AMP OUT (Level/Impedance) ..... 1 V/470 Ω
- POWER AMP IN (Sensitivity/Impedance) ..... 1 V/47 kΩ

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz

Usable Sensitivity ..... Mono; 10.8 dBf, IHF (0.95 μV/75 Ω)

50 dB Quieting Sensitivity ..... Mono; 15.3 dBf, (1.6 μV/75 Ω)
Stereo; 37.0 dBf, (19.5 μV/75 Ω)

Signal-to-Noise Ratio ..... Mono; 80 dB (at 65 dBf)
Stereo; 76 dB (at 85 dBf)

Distortion ..... Mono; 0.2 % (1 kHz)
Stereo; 0.3 % (1 kHz)

Capture Ratio ..... 1.0 dB

Alternate Channel Selectivity ..... 65 dB (400 kHz)

Stereo Separation ..... 45 dB (1 kHz)

Frequency Response ..... 30 Hz to 15 kHz $^{+0.5}_{-2.0}$ dB

Antenna Input ..... 300 Ω balanced
75 Ω unbalanced

AM Tuner Section

Frequency range
- U.S. model ..... 530 kHz to 1,700 kHz
- Multi-voltage model
  - With 10 kHz step ..... 530 kHz to 1,700 kHz
  - With 9 kHz step ..... 531 kHz to 1,602 kHz

Sensitivity (IHF, Loop antenna) ..... 300 μV/m

Selectivity ..... 25 dB

Signal-to-Noise Ratio ..... 50 dB

Antenna ..... Loop antenna

Miscellaneous

Power requirements
- U.S. model ..... AC 120 V, 60 Hz
- Multi-voltage model ..... AC 110 V/120—127 V/220 V/240 V (switchable) 50/60 Hz

Power consumption
- U.S. model ..... 440 W, 550 VA
- Multi-voltage model ..... 620 W
- In standby condition ..... 3 W

AC Outlets
- U.S. model
  - SWITCHED x 2 ..... TOTAL 50 W MAX
  - UNSWITCHED x 1 ..... 200 W MAX
- Multi-voltage model
  - SWITCHED x 2 ..... TOTAL 100 W MAX
  - UNSWITCHED x 1 ..... 200 W MAX

Dimensions ..... 420 (W) x 125.5 (H) x 395 (D) mm
16-7/16 (W) x 4-15/16 (H) x 15-9/16 (D) in

Weight (without package) ..... 10.7 kg (23 lb 10 oz)

Furnished Parts

- FM T-type antenna 1
- AM Loop antenna 1
- Dry cell battery (size "AA" (LR6/AM-3) Alkaline) 2
- Remote control unit 1
- Operating Instructions 1

NOTE:

Specifications and the design subject to possible modifications without notice due to improvements.

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

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